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THE UNIVERSITY OF ALBERTA

USE OF SELF-INSTRUCTIONAL AUDIOTAPES TO TEACH COMMUNICATION SKILLS TO NURSING STUDENTS

by

SUSAN RUTH LUDWIG

A Thesis

Submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Education

in

Counselling Psychology.

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1986

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submitted by SUSAN RUTH LUDWIG

in partial fulfillment of the requirements for the degree of Master of Education in Counselling Psychology.

Supervisor

Date: May 15, 1986

ABSTRACT

The purpose of the present study was to evaluate the effectiveness of self-instructional audiotaped programs to teach three communication skills to nursing students. The three skills were open-ended questioning, reflection of feelings and providing information.

The programs were developed from a microcounseling-type model that involved the following steps: (a) an introduction and brief instructions for each skill to be learned, (b) two modeled role-played interviews (both positive and negative modeling), (c) a segmented model session, (d) practice and modeled feedback, (e) final practice and evaluation. The programs were designed to be self-instructional and required active participation in the form of practice responses to patient statements.

The skill training programs were presented to 20 first year nursing students and were followed by post-treatment measures. 20 students also served as a control group. They were given post-tests measures and were then provided with the skill training programs. Post-tests involved written and oral responses to 6 patient statements for each skill and a final role-played interview with a surrogate patient. The responses for all three measures were rated by three judges.

Statistical analysis indicated a significant difference between responses made by the experimental group and responses made by the control group. The majority of the responses made by subjects in the experimental group showed a difference of one scale point over the control group. Correlations between the three dependent measures were significant ($p<.05$), except for the correlation between oral responses to single patient statements and role-played responses for the skill of open-ended questions. Suggestions were made for further utilization of this approach to skill training.

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CHAPTER I

INTRODUCTION

Communication forms the basis of all nursing care. Whether a nurse is admitting a patient, performing a treatment, or discharging a patient, he or she needs to be able to communicate in a therapeutic manner. Macleod Clark (1984) suggests that a nurse requires "a wide range of skills - skills which can be used to initiate, encourage, and maintain an appropriate dialogue with patients" (p. 54). She suggests that such a repertoire should include skills of open questioning, listening, attending, giving information and skills necessary to encourage further communication.

Research has shown that effective communication by nurses does affect patients (Macleod Clark, 1984). The skills of reflection and open questions have been found to increase the extent to which a patient will express feelings and concerns (Haase & De Mittia, 1976). Attending skills encourage a patient to continue in dialogue (Ivey, 1983). Effective teaching or the provision of information has been shown to decrease anxiety and stress levels, and even physical discomfort (Anderson & Leonard, 1964; Boore, 1978; Hayward, 1975; Wilson-Barnett, 1977). The rate of patient recovery has even been linked to the communication skills utilized by nurses (Maguire, Tait, & Brooke, 1980; Revans, 1974).

The importance of nurses possessing and utilizing effective communication skills cannot be underrated. Communication by nurses should be more than simple dialoguing. Rather, a high level of skill and experience is required for effective care to be given.

Nature of the Problem

Research on the communication skills utilized by nurses is fairly consistent and has not been complimentary. Generally, studies indicate that nurses' conversations with patients are infrequent, of short duration, and usually occur in conjunction with specific nursing tasks (Cormack, 1976; Faulkner, 1980; Goddard, 1953; Macleod Clark, 1982; Stockwell 1972; Wells, 1975). Macleod Clark (1984) noted that existing research of "real life nurse-patient communication shows that communication is poor" (p. 52).

Studies that have examined nurse-patient verbal interactions have isolated specific skills which nurses seem to have particular difficulty with. One of these is the skill of open questioning. Clark (1981) found that nurses frequently asked closed or leading questions in her study. Forrest

(1983) analyzed nurse-patient interactions on videotape and found that only 8.55% of verbal behaviors of the nurse were in the form of open questions. Maguire, Tait, Brooke, and Sellwood (1980) and Macleod Clark (1982) also found that nurses' questioning techniques were poor. They also found like Forrest, that closed questions were used more frequently than open questions.

Another skill nurses have difficulty with is that of reflecting. Studies indicate that this skill is used very little (Clark, 1981; Faulkner, 1980). Forrest (1983) found that reflection was used only 2.59% of the time in her analysis of nurse-patient verbal interations.

A third skill that nurses have difficulty with is patient teaching or providing information. Faulkner (1980) noted that nurses do not engage in teaching very often ,and in fact ,patient's questions are often ignored. Answering questions was ranked sixth on a ten point scale in terms of importance by nurses in one study (Pepper, 1977). Forrest (1983) found that only 5.53% of nurse-patient verbal interactions were given to providing information . Melia (1982) has suggested that nurses do not know how to answer patient's questions. Stein (1969) found in a questionnaire that 90% of nursing students admitted they did not know how to answer patient's questions. Macleod Clark (1982) like Melia suggested that one reason students did not know how to answer questions posed by patients was that they lacked the necessary skills to do so as they were not taught these skills.

One last skill that is cited by researchers as being the most difficult skill for nurses to utilize, is that of recognizing and responding to patients feelings. Macleod Clark (1982) found that skills used to focus on feelings were utilized by nurses less than one per cent of the time. Bond (1978), Faulkner (1980), Maquire (1978) and MacIlwaine (1980) all indicated that patients' emotional needs are often avoided or ignored by nurses. Forrest (1983) found in her study of nurse-patient verbal interactions that only 1.31 percent of nurses' responses acknowledged feelings.

Various explanations have been proposed to explain why nurses are deficient in therapeutic communication skills. By far, the most common explanation cited is inadequate training (Faulkner & Maguire, 1984; Nursing Times, 1984; Powell, 1982; Ritvo, 1963; Sethie, 1967). Macleod Clark (1984) noted that although communication forms the foundation of all nursing care "it is a subject that rarely explicitly appears in nursing curricula" (p. 52). Methods that are currently used to teach communication skills to nurses are not effective (Iverson, 1978). Faulkner and Maguire (1984) feel that new approaches need to be sought to adequately teach these skills.

Problems in this area are not unique to nursing education. Educators in other helping professions, such as counseling psychology, have encountered similar problems (Egan, 1975). Strategies and various teaching methodologies have been suggested and studied. One strategy in counselor education that has shown promise is the teaching of single skills necessary for helping.

Ivey (1971) has developed a model that has been shown by research to be successful in building competence in interviewing and counseling skills (Aldridge & Ivey, 1975; Baker, Scofield, Munson, & Clayton, 1983; De Mittia & Arndt, 1974; Haase & De Mittia, 1970; Moreland, Ivey, & Phillips, 1973). This model relies heavily on experiental learning and modeling prior to client contact. The basic microcounseling format follows a specified sequence which includes reading manuals, viewing models on videotape, practicing on videotape, and comparing practice tapes to model tapes. Ivey, however, was not rigid in either the media utilized for the modeling, or in the method of instruction. He advocated alterations and adaptations in the basic paradigm so as to suit various purposes and audiences.

One such alteration of the microcounseling paradigm was undertaken by Calder (1978) who adapted the microcounseling format to self-instructional programs on audio and videocassette tapes. In his programs modeling and experiential learning are still emphasized. Each program is designed to teach one specific skill. Research conducted by Calder (1978) and Eustace (1980) has indicated that the self-instructional method is effective to produce skill improvement .

Purpose of the Study

The purpose of this study was to evaluate the effectiveness of three self-instructional audiotaped programs to teach the skills of open-ended questioning, reflection of feelings and providing information to nursing students. The programs were developed on one audiocassette tape following Calder's adaptation of the microcounseling format. Slight revisions in his original format were undertaken to increase the modeling and experiential components of the programs.

The specific objectives of this study were to:

1. Determine the effectiveness of the self-instructional programs using Carkhuff-like scales to rate written responses to single patient statements presented in printed format.
2. Determine the effectiveness of the self-instructional programs using Carkhuff-like scales to rate oral responses to single-patient statements presented on audiocassette tape.
3. Determine the effectiveness of the self-instructional programs using Carkhuff-like rating scales to rate reponses made by the participant in a role-played interview with a surrogate patient.

In addition, three other specific objectives were considered relevant to this study. These were to:

4. Determine whether there is a correlation between written and oral responses to single patient statements.

5. Determine whether there is a correlation between written responses to single patient statements and responses made in a role-played interview.
6. Determine whether there is a correlation between oral responses to single patient statements, and responses made in a role-played interview.

The programs and the dependent measures are described in greater detail in Chapter III and the Appendices. This study, then, was designed to investigate the efficacy of adapting the microcounseling paradigm to a self-instructional format to teach three communication skills in a practical and efficient manner. The dependent measures were designed to evaluate the utilization of these skills in a hierarchial manner. The hierarchy of responses were from written and oral responses to single patient statements, where each skill was to be demonstrated separately, to a role-played interview where it was necessary to combine the three skills.

CHAPTER II
REVIEW OF THE LITERATURE

A review of recent and relevant publications in the fields of nursing, psychology and education has yielded concentrations of literature falling into the general areas of: strategies utilized by nurse educators to teach interviewing skills, competency-based education, microrocounseling and its components of modeling, single skills and systematic practice, the Calder model,self-instructional strategies utilized by nurse educators, and program development for self-instructional audio-visual material. This literature review will present each topic separately.

Strategies Used by Nurse Educators to Teach Interviewing Skills

Current methods utilized by nurse educators to teach interviewing skills vary widely. Iverson (1978) noted that although communication has been a component of nursing education for decades, the instruction has generally not been effective. She noted that instruction has generally been "delivered in lecture form with little or no participation on the part of the student" (p. 12). She also noted that at times these lectures have been augmented with written assignments, handouts, role-playing, or videotapes to demonstrate "how to". Following one or more of these strategies, students are sent off to practice with patients and the philosophy of "sink or swim" pervades.

A review of instructor's manuals provided by publishers of popular psychiatric nursing texts shows that Iverson was fairly accurate in her appraisal. For example, Stuart and Sundeen's (1983) "Instructor's Manual" suggests the use of discussion or essay questions following lectures. This manual also recommends that students should view a videotape of their group or their interaction with a patient to analyze verbal and nonverbal skills utilized. Lastly, role-playing is also recommended. The instructor's manual provided by Beck, Rawlins, and Williams (1984) recommends similar teaching strategies. They advocate that role-playing and written process recordings should follow lectures. A third instructor's manual provided by Wilson and Kneisl (1983) recommends lecture, role-playing, discussion, field observations and analysis of process recording. The striking similiarity about the strategies suggested in these manuals is that the strategies recommended are neither systematic nor efficient in terms of time.

Other writers in this area have suggested dramatically different approaches to teach interviewing skills. Faron and Evans (1981) stated that a workshop was an ideal method to teach communication skills because they felt that affective learning is necessary and best accomplished through group discussion and activities. They suggested that the workshop should include

demonstration of both poor and good interviewing skills, role-playing exercises and evaluation of learning. They also felt that evaluation should take place at a later date to determine if skills generalized to practice. They conducted a workshop and evaluated it four months later using self-reports of changes in clinical behavior and a short test of theory. They noted that the students who attended the workshop reported an increased ability to utilize communication skills and that 70% passed the written examination with 100% accuracy. However, no limitations regarding self-reports or the "short-test of theory" were mentioned.

Smith, Margolius, and Ross (1982) developed a "trigger-tape" to teach communication skills to nursing students. This was a videotape with six situations depicting nurse-patient interactions. Each tape demonstrated therapeutic and non-theraputic techniques of communication. The authors "validated" the use of their trigger-tape with a group fo 17 allied health students in a one group pre-test, post-test non-experimental design. Evaluation of the instrument consisted of a Likert scale used to rate behaviors in a simulated role-play and also a ten-item multiple choice test. Four judges rated a pre-role play and a post-role play for each student. The researchers reported that results were significant ($p \leq .05$) using the paired t-test for analysis. They concluded that the videotape had a "significant effect on the acquisition of knowledge and clinical skills" (p. 46). They did not, however, report which clinical skills they were attempting to teach, nor did they provide information about the Likert scales they used. In addition, it seems that a ten-item test is rather short to determine the degree of cognitive knowledge.

Talento and McKeever (1983) also discussed the use of a videotape to teach interviewing skills, but in a slightly different way. They utilized the videotapes to tape a role-played interview after the skills were first taught through modeling. The role-played interviews were then critiqued by faculty and peers. The authors reported that they felt the videotaped role-play increased students' awareness of their communication patterns and their ability to analyze their strengths and weaknesses. No statistical analysis was applied to test the effectiveness of this method.

Woodbury and Ayers (1984) described a rather innovative strategy to assist students to "communicate effectively with patients and professional colleagues" (p. 30). Students participating in their study, to determine the effectiveness of their strategy, role-played an interview on videotape. Instead of instructor feedback, they utilized a microcomputer to help the students examine their techniques of communication. The reason a microcomputer was used was to allow student learning without fear of others' reactions, including instructor or authority figures. The student and the role-played interviewee both sat down at the computer after the interview and it presented a structured sequence of questions to both. The computer summarized the interview for both participants at the end. Woodbury and Ayers tested this method of learning with 16 students, each

completing five interviews and five sessions at the computer. Results were reported qualitatively. The authors stated that results indicated that in the initial interview students felt "more upset and least at ease" (p. 33), but by the fifth interview they felt "much less upset and much more relaxed" (p. 33). Whether or not skill improvement occurred was not mentioned, nor did the authors discuss which skills they set out to teach.

Iverson (1978) described the use of the Ivey microcounseling model to teach interviewing skills. She felt that the merit of this model is that it "utilizes immediate and concrete feedback via videotape to teach developmental skills of relating to others" (p. 13). She noted another merit of this model is that it breaks down interviewing skills into its components, teaches each separately and ensures competency in learning the skills by practice. She stated:

> "It's primary advantage is that of parceling interviewer behavior into small, easily learned units which can be practiced as often as the student wishes. Furthermore, it encourages active involvement and provides instant feedback in several forms: self-critique, peer/teacher evaluation, and video-taped role-play. Bridging the gap between classroom and clinical; microcounseling has the additional advantage of being "safe"; the student practices on fellow students and volunteer clients" (p. 13).

She concluded that the microcounseling model is an effective and satisfying method of introducing interviewing skills to beginning interviewers and dubbed it as "the process which tends to avoid pitfalls and places the learning of communication skills where it should be - in the experiential" (p. 13).

Various methods are reported in the nursing literature to teach communication skills. Some methods are quite innovative and may be effective. However, conclusions about methods like the microcomputer utilized by Woodbury and Ayers are difficult to make. The research reported is full of methodological problems. Of the studies reviewed in this chapter none reported which skills they attempted to teach, nor exactly how they measured the degree of learning by the participants. One conclusion that can be drawn is that strategies utilized by nurse educators to teach interviewing skills vary widely. It seems that these methods are not systematic nor are they cost efficient. As Iverson pointed out, however, the microcounseling model seems to be quite systematic and effective. This method requires that single skills be defined behaviorally, and taught utilizing modeling, systematic practice on videotape and systematic evaluation of skill acquisition.

Competency-Based Education

Recently in nursing education, as well as in other disciplines, there has been a concern over the competence of newly graduated practitioners. The cry for competent nurses who have

adequate skills to practice in clinical settings can be heard from nurses themselves, their professional organization (Alberta Association of Registered Nurses, 1980), hospital boards (Alberta Hospital Association, 1978) hospital adminstrators (Boyd & Conrad, 1981; Hammersted, Johnston, & Land, 1977) and consumers (Lenburg, 1979). In response to these concerns, the development of competency-based programs in nursing has occurred. In competency-based programs skill acquisition is evaluated through a wide range of affective and cognitive criteria rather than only through written tests of cognitive knowledge (Riesman, 1979). Howsam and Houstan (1972) defined competence as "adequacy for a task" or as having "possession of required skills, knowledge and abilities to function in a given field" (p. 3).

The concern over competence is particularly relevant in interviewing skills. A theoretical understanding of the skills necessary to be an effective interviewer is not enough; the ability to transfer this theory to practice is crucial. Methods used to teach these skills must help ensure this. The Ivey Microcounseling model seems to be effective to ensure competence in interviewing skills. Ivey and his associates (1978) spoke directly to the issue of competence. They stated, "The outcome variable of effective training is an effective trainee - a helper who can demonstrate specific competencies of helping with equally demonstrable effects on the helpee." (Ivey and Authier, 1978, p. 53). Ivey (1983) even provided very specific measures of competency for various skills. He designed a hierarchy of skills (1983) and four levels of competence that can be reached for each skill. Within each level, Ivey provided specific criteria to determine the mastery level reached.

Ivey and Authier (1978) believe that one of their model's major contributions is in the area of competency-based helper training. It seems that the specificity of this model offers a very effective and useful training system for any educator who teaches interviewing skills and would be useful in nursing education.

Microcounseling

Research on the microcounseling model developed by Ivey (1971) has been quite extensive and quite favorable. Microcounseling is thus named because of its focus on single skills. From this, the gradual building of competence in interviewing skills occurs. The basic microcounseling paradigm follows a well structured sequence for each skill. First, a base line interview between the student and a volunteer client is videotaped. Second, training in one or more skills is undertaken. The student is supplied with reading material on the skill(s), views a model on videotape who utilizes the skill, views his or her own tape, and then compares it to the model's tape. Third, another videotape between the student and volunteer client is made and reviewed. Throughout this sequence a positive, supportive relationship between the trainer and student is

stressed. The trainer focuses on positive aspects of performance. This systematic, single-skills approach is quite purposeful; designed to ensure competence in each skill. It is also designed so as not to overwhelm the student.

The components of this model are based on social learning theory (modeling), operant techniques (focus on positive behavior while ignoring negative behavior), and humanistic theory (the positive, supportive relationship between student and trainer). Ivey and Authier (1978) state that while a warm, supportive, and genuine attitude of the trainer is important, the most important aspect of the training process is that "the supervisor in a microtraining session must model the skills he or she is teaching" (p. 12).

Although the basic microcounseling model stresses a sequential, single-skills approach, Ivey and Authier (1978) have noted that many variations in this paradigm are possible. These authors and many others have suggested and/or studied alterations such as using multiple supervisors or even eliminating supervisors (Authier & Gustafson, 1975, 1976), substituting programmed instructions for written manuals, both with and without models (Evans, Hearn, Uhlemann, & Ivey, 1979), varying the amount of video feedback (Boyd, 1973) and substituting audiotapes for videotapes (Wawrykow, 1970; Yenawine & Arbuckle, 1973). All of these alterations have been successful in varying degrees to teach interviewing skills. One other alteration that is particularly relevant for the present study is the adaptation of the microcounseling model to self-instructional audio and videotapes (Calder, 1978). This has been shown by research to increase skill acquisition.

The microcounseling model has also been shown to be successful in a wide variety of areas and disciplines. Initially it was developed for counselor education (Baker, et al., 1983; DeMittia & Arndt, 1974; Guttman & Haase, 1972; Ivey, 1971, 1974). Other disciplines have also found the model useful to teach interviewing skills. It has been used to train support personnel (Haase & De Mittia, 1970; Haase, De Mittia, & Guttman, 1972), paraprofessionals (Authier & Gustafson, 1975), undergraduate students (Uhlemann, Lea, & Stone, 1976), medical students (Moreland, Ivey, & Phillips, 1973), junior high students (Aldridge & Ivey, 1975) and nursing students (Spruce & Snyders, 1982). More recent applications of this model even include the training of prison personnel (Gluckstern, Packard, & Wenner, 1975), vocational counselors (Ivey, 1985) and persons in industry (Ivey, 1985). All of these demonstrate the applicability of the microcounsling model to a wide variety of theoretical orientation and settings.

The value of this model not only lies in competency-based training. It also has value to the client. Ivey and Authier (1978) state:

> "Many are concerned about 'unleashing' the beginning therapist on the first client. The casual observer of

> a novice clinician often wonders if the wrong person is doing the interviewing. Full of anxieties, trying to remember a list of do's and don'ts, the beginning interviewer is often most ineffective" (p. 15).

As such, Ivey and Authier note that this beginner may detrimentally affect a client. The microcounseling model attempts to ensure competency prior to client contact. This model, therefore appears to be an effective method for all involved. It is built on and from other theories. Its components include modeling, role-playing and systematic practice of single skills. These components will now be discussed separately.

Modeling

Modeling is a major component of the microcounseling paradigm (Ivey & Authier, 1978). Taken from social learning theory (Bandura, 1977), modeling has been "established as an effective, reliable and fairly rapid method for the acquisition of new skills or the strengthening of previously learned skills" (Perry, 1975, p. 133). Ivey and his colleagues have shown that modeling via videotape, audiotape, or by live models has been an effective addition to the microcounseling training paradigm. The use of modeling to teach interviewing skills has been widely researched and the adoption of this into the microtraining model is based on the belief that it is an effective and efficient strategy when combined with other teaching strategies.

By and in itself, modeling has been shown to be more effective in skill training than the use of written material (Frankel, 1974), experiential learning (Payne, Weiss, & Kapp, 1972), learning by reinforcement (Eisenburg & Delaney, 1970), and feedback combined with experiential learning (Ronnestad, 1977) . In the research it is noted that modeling is also effective when combined with other instructional techniques. For example, researchers have shown that programmed instruction is an effective technique to teach interviewing skills (Hartely, 1974; Mackie, 1975; Stones, 1968). When modeling is added, however, learners become more enthusiastic and more involved (Uhlemann, Hearn, & Evans, 1977). The use of instructions combined with modeling has also been studied. Green and Marlatt (1972), Masters and Branch (1969), and Whalen (1969) all found that the use of modeling may be enhanced with instructions to attend to certain behaviors: Perry (1975) found that although instructions augmented learning, it was the modeling that was the critical factor in her study on empathic counselor responses. McGuire, Thelen, and Amolsch (1975) also found similar results in their study . They concluded that videotaped models were more effective in teaching the skill of self-disclosure than were videotaped instructions.

The microtraining paradigm utilizes models on videotapes, live or on audiotapes. The first is preferred; however, the last two are viable alternatives (Ivey & Authier, 1978). Ivey and Authier

indicate that a possible problem with audiotaped models is that students may focus on verbal interactions alone and may miss nonverbal or behavioral aspects of the skills modeled. They suggest that a way to overcome this is to supplement the audiotaped model with "skilled observation and behavior counts" (p. 304). All three ways of presenting models have been shown to be effective when teaching interviewing skills. Videomodeling, with much research on its effectiveness (Alssid & Hutchison, 1977; Dalton, Sunbald, & Hylbert, 1973; Goldstein, Cohen, Blake, & Walsh, 1971; Ronnestad, 1977) does have its disadvantages. It is quite an expensive teaching tool both in terms of equipment needed and time required by support personnel (Baker, et al., 1983; Peters, Cormier, & Cormier, 1978). Audio modeling has been shown to be an effective alternative (Eustace, 1983; Goldstein, 1973; Perry, 1975). When time and cost need to be considered, audiomodels become a viable alternative.

The microcounseling training paradigm utilizes videomodels demonstrating both positive and negative behaviors (Ivey & Authier, 1978). Investigations into this as compared to models demonstrating only positive behaviors have yielded mixed results (Alssid & Hutchison, 1977). Some researchers have studied mixed videomodels and have felt that the presentation of both positive and negative behaviors is more effective than models demonstrating only positive behaviors. The reason is that it is felt that students learn to discriminate effective therapist behaviors more so from mixed models (Frankel, 1971; Ivey, 1974; Truax, Carkhuff, & Douds, 1964; Ward, Kagan, & Krathwohl, 1972). Others have disagreed with this. Berliner (1969) claimed that videomodels demonstrating negative behaviors interfere with the transfer of learning. Alssid and Hutchison (1977) demonstrated that the use of only positive videomodels was effective to teach the skill of open-ended questions. Their research, however, does not permit agreement with Berliner's claim that negative modeling would interfere with learning. Ivey and Authier (1978) advocate the use of both positive and negative models. They state "Teaching by contrast has become a standard part of microteaching behaviors" (p. 319). They note that this method helps the student identify negative behaviors easily.

The use of modeling has been systematically studied. However, the nursing literature is sparse on this topic. Scattered studies and reports indicate that modeling is an effective technique to teach interviewing skills to nursing students. Most of these articles focus on videomodeling (Carpenter & Kroth, 1976; Finely, Kim, & Mynatt, 1979; Smith, Margolius, & Ross, 1982). Therefore it seems that nursing educators must "borrow" form the research of other disciplines and start to validate results with their own populations.

Single Skills and Systematic Practice

The microtraining model is built on single skills. Many other training programs focus on entire concepts or theoretical orientations, taking a "gestalt" approach to instruction. The ineffectiveness of this has caused concern. Egan (1975) stated,

> "In general, the literature reveals a renewed realization of the necessity of teaching skills systematically and experientially, both to prospective helpers and to people who are interested in improving their interpersonal style. I have shown concern over the goallessness and ambiguity that have characterized so much of the human-relations-training movement and have suggested that systematic skills training be integrated into these processes" (p. 4).

Egan suggested that the best kind of helper training includes skill training along with experiential components because he felt that we need to train individuals to be "functional professionals" who possess skills, not only cognitive knowledge.

Others have also emphasized the necessity of teaching single skills versus entire concepts (Ivey, 1971; Kagan, 1973). Experiential learning is also stressed with single skill approaches (O'Toole, 1979). Research has shown that the teaching of single skills along with practice can bring a student to the "mastery level" of competence (Ivey, 1983) quicker than more traditional and complex methods (Egan, 1982; Fyffe & Oei, 1979; Ivey & Authier, 1978; Sawyer & Sawyer, 1981). Ivey and Gluckstern (1976) wrote, "A variety of studies have examined single skills... The sum and substance of these studies have been to indicate that skills can be taught systematically" (p. 1).

Ivey and Authier (1978) reported numerous studies that have indicated that either one or more single skills have been taught successfully via the microtraining method. They also noted that those who become competent in single skills, who have the knowledge of, and can utilize individual interviewing skills are more empathic and facilitative than those trained by other methods. Studies support this (Dunn, 1975; Hearn, 1976; Moreland, Ivey, & Philips, 1973; Spruce & Synders, 1982; Tuokmanian & Rennie, 1975). Spruce and Synders (1982) in their study of student nurses trained by microcounseling techniques found that students improved in interviewing skills, and as well, in levels of warmth, empathy, and congruence.

The merit of the single-skills approach in the microcounseling training model is evident. However, little evidence of such an approach is apparent in the nursing literature. Textbooks on communication in nursing are guilty of the "gestalt" approach. For example, Smith and Bass (1979) devote a chapter to medical interviews in their communication textbook. They discuss settings of interviews, qualities of the interviewer, counseling theory and general concepts of questioning and listening. Hein (1973) in her book, "Communication in Nursing Practice", covers open and closed questions; leading questions, the use of silence and tactics of clarification. These are discussed in

theory and little "how to" utilize these skills is provided. These two books are fairly representative of the literature on communication in nursing. The student becomes overwhelmed with pages and pages of theory, however, still does not know at the end how to conduct an interview.

Calder Model

Calder (1978) adapted the microcounseling model to a self-instructional method utilizing both audio and videotapes. The audio programs developed by Calder and Borgen (1978) include the skills of empathy, reflecting feelings, reflecting content, pinpointing thoughts and feelings, specificity, and open-ended questions. These programs were tested by Calder (1978) and were found to produce a significant improvement in the defined skills for a group of undergraduate students. In the Calder programs experiential learning is encouraged by having the listener respond to taped client statements. Modeling is also utlized on video or audiotapes.

Eustace (1980) developed a videotape following the Calder model to teach the skill of immediacy. He evaluated this, along with four videotapes developed by Calder (empathy, open-ended statements, reflection of content and specificity, and concreteness) using a group of undergraduate teachers. Pre and post-test measures involved both written and oral responses to client statements. These responses were rated by three trained judges on Carkhuff-type five point scales.

Statistical analysis indicated significant improvement in all skills on both written and oral measures ($p<.05$). Eustace stated "The majority of subjects showed an increase of one scale point to a level indicating competence in the skill" (p. V). He also evaluated the relationship between oral and written responses as dependent meausres. He found significant correlations ($p<.05$). in reflecting content, empathy and immediacy. The other correlations for specificity and open-ended statements were not significant, but they were positive. From this, Eustace concluded "these results do not support using verbal measures and written measures interchangeably" (p. 63). This is important when one considers the method of evaluation in studies of communication skills training. Lastly, Eustace requested subjective evaluations from participants and found these to be quite favorable.

Self-Instructional Strategies in Nursing Education

It is clear in nursing education that methods of instruction are fairly traditional (de Tornyay & Thompson, 1982). The most common teaching strategy is lecture. Other teaching strategies are beginning to be utilized by nurse educators. Among these is the self-instructional method.

Studies of self-instructional methods in nursing have indicated that these have been

successful to teach various aspects of nursing (Langford, 1975; Rochin & Thompson, 1975; Stein, Steele, Fuller, & Langhoff, 1972; Thompson, 1972). de Tornyay and Thompson (1982) described some of the values of this method. They noted that increased student responsibility and participation are two assets. Self-instructional teaching also allows for differences in student needs, interests, and learning rates. In addition, this method also allows the student to move as rapidly or as slowly as needed through the material to establish competence. Lastly, this method "cultivates the skills and attitudes that are essential for life time learning" (de Tornyay & Thompson, 1982, p. 138).

Various means to evaluate learning accomplished through self-instructional teaching were discussed by Coffey (1975). Possible tools she suggested include checklists, written examinations, oral examinations, performance testing, interviews, and conferences. She noted that evaluation should be done in the domain that the self-instructional program was designed for. Programs designed to teach psychomotor skills should require that the student demonstrate the skill. The cognitive domain should be evaluated through written examinations and the affective domain can be evaluated through interviews, self-reports, and subjective test questions. This is particularly relevant for the present study. Researchers have found in studies evaluating strategies to teach interview skills that different dependent measures tap different skills (Stone & Stein, 1978; Stone & Vance, 1976). Dependent measures requiring oral responses likely tap skill delivery, whereas those requiring written responses may tap cognitive knowledge (Eustace, 1980).

Although reports of the use of self-instructional programs in nursing exist, actual research on the implementation of these seems to be limited. Meyers and Greenwood (1978) noted that "very little research has been done on auto-tutorial techniques in nursing education" (p. 13). Results of research that does exist are mixed. Some studies have yielded positive results; others have not. Paduane (1979) reported that independent study can be successful with a wide variety of students, even those "marginal ... failing students" (p. 35). She developed a self-instructional course to teach drug administration to nursing students. No formal structured learning activities were provided. Student and instructor feedback was quite positive about the course and outcome. However, no indication of grades or success measures were reported.

In a more empirically conducted study, Myers and Greenwood (1978) compared traditional and self-instructional methods in two fundamental nursing courses (Fundaments I and II). These courses included material on basic nursing skills with an emphasis on "critical thinking, communication and the nursing process" (p. 9). Evaluation measures included final course grades and NLN examination scores (National League of Nursing Examinations). Their sample was three consecutive classes of sophmore nursing students in the years from August 1973 to April 1976. All

students had the same prerequisites and similarity was controlled for by entering SAT scores for each class. These were 949, 942, and 954 respectively. The study was conducted over three years; the courses were taught once each year. In the first year the courses were taught using traditional instruction. The next two classes were taught using self-instructional methods. The self-instructional methods were structured with weekly one hour seminars for discussion. The materials used included films, tapes, slides, videocassettes, and study guides. Results indicated that the auto-tutorial method was more successful than the traditional method. There was a significant increase in higher grades and a decrease in lower grades in the self-instructional classes over the class taught by traditional methods ($p<.05$).

In another study Hogopian, Wemett, Ames, Gelein, Osborne, and Humphrey (1982) compared traditional and self-study methods to teach the skills of physical assessment to community health nurses. Nurses who volunteered were randomly assigned to one of two groups; a control group taught in the "usual way" (film, lecture/discussion, assigned readings and laboratory practice) and an experimental group who were taught through a self-instructional approach. Results showed no difference between the two groups on written examinations. However, the control group scored significantly better on tests of psychomotor skills. The researchers stated that their results suggested that psychomotor skills required to perform assessment were best taught with supervision and in a laboratory setting.

Many more reports on self-study exist. Many are not empirically reported and most exist in areas of nursing other than in interviewing or communication. In fact, the writer could find no reports of self-instructional methods to teach communication skills.

Program Development for Self-Instructional Audio-Visual Material

Bill and Abedor (1977) published a book to assist those in developing audio-visual self-instructional material. This bears discussion because of the relevance to this study. They state five steps are necessary to develop self-instructional audio-visual material. These are:

1. Writing a description of the program.
2. Writing instructional objectives in behavioral terms.
3. Determining which criterion measures will be used to assess desired learning.
4. Developing the instructional program in the audio or visual format.
5. Testing the program and gathering results for revision if necessary.

The use of self-instructional methods has been discussed. Research indicates that self-instructional methods may be as effective or more effective than traditional approaches to teach certain components of a nursing program. No research has been done in nursing education to

determine if interviewing skills can be taught by this method. Self-instructional learning methods have an advantage of time and cost effectiveness. Their effectiveness to teach communication skills in nursing needs to be documented.

Conclusions From Skills Training Techniques and Self-Instructional Learning

The literature reviewed suggests that teaching of communication skills to nursing students is presently ineffective. Methods vary widely and no two nurse educators can agree on which method works best. In present economic conditions, cutbacks in educational funding are abundant and an efficient cost effective strategy to teach required skills becomes very important. This strategy must also produce competence to meet the demands of consumers and employers of health care facilities. One approach that meets these requirements is that of microcounseling. Competence in skill utilization and the generalization of skills to actual patient encounters is reported in the literature. This model is less expensive in terms of cost and time than many innovative teaching strategies reported in the nursing literature such as workshops or the use of microcomputers for feedback.

Taking the importance of cost effectiveness in terms of equipment and time one step further is the Calder model. This adaptation of the microcounseling model does not require the utilization of video tape equipment or instructor feedback. As such, time and cost are decreased. This model has been shown to be successful to increase skill acquisition. It relies on modeling, experiential learning and feedback which are the most important aspects of the microcounseling model.

There is some evidence to indicate that self-instructional techniques may be as effective as other traditional instructional methods. Assets of this method of instruction include allowances for student needs, interests and learning rates, as well as being cost effective. Writers in this area stress the importance of evaluation of learning being done in the domain that the self-instructional program was designed for. As such, in evaluating a self-instructional program designed to teach interviewing skills, evaluation of the students' ability to utilize such skills is necessary. Concerns about competency and the movement towards competency-based programs in nursing education also require that students possess skills necessary to function, not just cognitive knowledge. Lastly, the whole value of teaching interviewing skills lies in the ability of the learners to utilize these skills in nurse-patient interactions. Therefore evaluation procedures should assess skill delivery in actual nurse-patient encounters.

CHAPTER III
METHODOLOGY

Overview

This study involved the development and evaluation of three self-instructional audio-taped programs to teach the skills of open-ended questions, reflection of feelings and providing information. In this chapter the preparation of the audioprograms is described and the method of program evaluation is explained.

Program Development

The first step in conducting this study was to produce the three programs on one audiocassette tape. This involved defining the skills to be taught, writing a script using the Calder model as a framework, and finally producing the audiocassette tape. These steps are now described in more detail.

Defining Open-Ended Questions

To utilize the microcounseling techniques of Ivey (1971, 1983) it was necessary to define open-ended questions in specific behavioral terms. Brammer (1979) defined open questions as those "that leave helpees free to explore and take the interview where they wish, rather than into areas of helper interest" (p. 77). He noted that open questions cannot be answered with a "yes" or "no". Ivey (1983) stated that open questions "are those that can't be answered in a few short words" (p. 41). He specified that "typically, open questions begin with what, how, why or could" (p. 41). He further noted that "why" questions may "put interviewees on the defensive and cause discomfort" (p. 47).

The aim of open questions, then, is to encourage responses from a patient that have breadth and elaboration. The foci of Brammer's and Ivey's definitions were considered necessary in this program. From this, four behavioral components of the skill open-ended questions were defined for the purpose of this study. These were (a) an open-ended question should be more than one or two words, (b) an open-ended question should encourage a patient to provide a response that is more than one or two words, (c) an open-ended question should be relevant to the patient's statement or concern, and (d) the open-ended question should not be threatening.

Defining Reflection of Feelings

As with the open-ended questions, the skill of reflection of feelings needed to be defined in specific behavioral terms to utilize the microcounseling model. Brammer (1979) defined this skill as

"involving expressing in fresh words the helpee's essential feelings, stated or strongly implied" (p. 78). The steps involved to reflect feelings according to Brammer include (a) "determining what feeling the helpee is expressing", (b) "describing this feeling clearly", (c) "observing the effect", and (d) "judging by the reaction of the helpee whether the reflection was facilitative or obstructive" (p. 79). Ivey (1983) defined the purpose of reflecting feelings as being "to make ... implicit (or partially implicit) feelings explicit and clear to the client" (p. 107). Rogers stated that the aim of reflection is to enable the client to "see his own attitudes, confusions, ambivalences and perceptions accurately (hopefully) expressed by another person ... but with a new quality stripped of the complications of emotion" (Carkhuff & Berenson, 1967, p. 66).

The aim of using this skill then, is to assist a patient to recognize, identify and clarify his or her feelings. Three behavioral components of the skill of reflection of feelings were defined for the purpose of this program. These were, (a) the response should identify a feeling implicitly or explicitly expressed by the patient, (b) the response should reflect this back to the patient, using an accurate adjective to describe the feeling, and (c) the response should encourage the patient to clarify, recognize, or identify his or her feelings.

Defining Providing Information

Again, a behavioral definition of this skill was necessary to utilize the microcounseling model. Smith and Bass (1979) noted that a nurse who gives information to a patient should utilize appropriate language understood by the patient. The message should be brief and concise, but cover necessary information utilizing repetition of key points, quotations and statistics if appropriate to emphasize important points. They also noted that it is important to build on what the patient is already familiar with and that it is also important to "check-out" with the patient to determine the degree of understanding that has been achieved. Faulkner (1984) noted that information should be given at appropriate times, levels, and in appropriate form. Ivey (1983) noted that information should be "clear, specific, and relative to the clients world" (p. 192).

The purpose of giving information is to provide an accurate understanding of a specific treatment or condition to a patient. In addition to this obvious purpose, studies have indicated that reduction of stress and anxiety also occurs when patients are provided with accurate information (Anderson & Leonard, 1965; Boore, 1978; Elms, 1964; Hayward, 1975).

The aim of this skill, then, is to provide accurate information to a patient which may assist in alleviating stress and anxiety caused by the unknown. Four behavioral components were defined for the purpose of this study. These were that the information provided by a nurse should (a) be presented in language that is appropriate for the patient, (b) be adequate to cover necessary

information utilizing examples or descriptions if appropriate, (c) build on knowledge the patient already has, and (d) should include a "check-out" to determine the degree of understanding. In addition to these components the writer felt that two more behavioral components were desirable. These were that (a) the information should be presented in a sensitive manner and (b) if the nurse cannot answer a patient's question, due to a lack of background knowledge or the nature of the patient's question, she or he should acknowledge this.

Program Design

The format for the audiotaped programs followed the model developed by Calder (1978) with a few revisions to his original format. In the original format developed by Calder, the trainee listened to a number of vignettes in which a professional counselor demonstrated the skills with a client. He or she was then requested to respond to 6 client statements which were followed by an appropriate modeled response by the professional counselor. Lastly, the trainee was asked to respond to 6 client statements without the coupled modeled response by a professional counselor. The components of the Calder format are described in Table 1.

The revisions to the original format were designed to increase both the modeling and practice components of the program. Because these two components are considered the most important in the microcounseling paradigm, the amount of modeled responses coupled with practice responses were increased from 6 to 12 for each skill taught. Other revisions to the original Calder format were that the initial pretest was excluded and the modeled interviews demonstrated utilization of each skill in both positive and negative ways. The negative modeling was included in the programs to help provide contrast. The basic components of the three programs are shown in Table 2.

The three programs were produced on one audiocassette tape. The tape was introduced with a short statement about the purpose of the program, the three skills to be covered and the format. Instructions were given in a manner encouraging the student to practice out loud along with the tape. Each skill was then presented (see appendix A).

Production of the Audio-Cassette Tape

The audiocassette tape was produced in the studio of Mr. Dan Bagan who also played the role of the patient on the programs and conducted the editing. The role of the nurse was played by a retired Registered Nurse. The commentating was done by the writer. Assistance in writing the scripts and editing the programs was received from Dr. Calder. The timing was considered to be an important element in producing a quality production. A 15 second pause was allowed for student responses. The duration of each segment is shown in Table 2. Copies of the audiotaped program

are available from Dr. Calder or the author. Since the programs required sustained concentration it was decided that a break at the end of each skill was necessary. During these breaks participants in the experimental group were required to complete the written post-tests for the specific skill he or she had completed. After he or she had finished all three programs he or she was asked to complete both oral post-tests.

Table 1

Components of the Calder Model

Components	Description of Components	Approximate Time (minutes)
I Pretest Base level performance	Trainee responds to different client statements	1.5
II Modelled Session	Counselor models the specific skill in an interview	4.5
III Segmented Model	Counselor models the specific skill in response to 6 individual client statement	4.0
IV Practice and Self Evaluation	Trainee responds to 6 client statements and hears appropriate counselor response following each	7.0
V Post-test	Trainee responds to 6 different client statements	1.5

Table 2

Components of the Three Audiocassette Programs

Components	Description of Component	Approximate Time (minutes)
I Introduction to each skill	A brief description of each skill is provided.	1.5
II Modeled Sessions	A nurse models the specific skill in both a positive and negative manner with a role-played patient. Differences between the interviews are noted.	7.0
III Segmented Model	A nurse models the specific skill in response to 6 separate patient statements.	3.0
IV Segmented Practice and Model	12 separate patient statements/ questions are provided; the student responds to these and then hears appropriate modeled responses following each	6.0
V Practice and Self Evaluation	The student responds to 6 separate patient statements	3.0

Program Evaluation

Research Design

For the evaluation of the programs an experimental and a control group completed all post-tests. The experimental group was provided with the audiocassette programs and then the post-tests followed. The control group was provided with a short definition of each skill. Students in this group then completed all three post-tests. Following this they were all encouraged to listen to the audiocassette programs.

Both groups received the same post-tests. First, all students were requested to write 6 responses to patient statements presented in written form for each skill. Then all students were asked to respond orally on audiocassette tape to 6 patient statements presented orally on audiocassette tape for each skill. Finally, all students were asked to talk with a role-played patient utilizing all three skills. Instructions for this interview were presented on a printed page to ensure each student received the same instructions. The instructions on the printed sheet encouraged the students to utilize all three skills to teach the role-played patient about a low salt diet for hypertension. They were instructed to find out how the patient felt about her diagnosis and teach her what the diet entailed. The specific points for the diet were included to ensure each student had the necessary background information so that cognitive knowledge of the diet was not evaluated. (See Appendix B for the instructions).

For the oral and written post-test measures a pool of 12 patient statements or questions were developed and then randomly assigned to either the written or oral post-test to ensure similar relative difficulty. Prior to both oral and written post-tests for the section on providing information a short description of a situation was given. This was done to ensure that necessary background information was provided for the students so that cognitive knowledge was not evaluated. Rather, how the student presented the information to the patient statements on both post-tests could then be evaluated. (See Appendix C for written post-tests.)

The oral post-tests for each skill were presented on audiocassette tape. This tape was also produced in the studio of Mr. Dan Bagan who again played the role of the patient and conducted the editing. On this tape, instructions on how to complete the oral post-tests were provided along with a short definition of each skill. The student was given 15 seconds to respond on his or her own audiocassette tape. The same tape was used for both groups of students (see Appendix D). Two tape recorders were set up in a room where the student was left alone to complete the post-test.

Evaluation of the audiocassette programs then consisted of six written responses and six oral responses for each separate skill, and a short interview with a role-played patient in which all

three skills were supposed to be utilized. Rating scales were developed from the behavioral definitions for each skill (see Appendix E and F) to rate responses.

Sample

The subjects who participated in the evaluation of the audiocassette programs were 40 student nurses in their first year of a three year diploma nursing program at a hospital based school of nursing in greater Edmonton. Their participation in the study was voluntary and a consent to participate was received from all students involved (see Appendix G). Random assignment of the 40 volunteers to either the experimental group or the control group was conducted.

In the sample, 39 females and 1 male volunteered for the study. The ages ranged from 17 years to 40 years with the average age being 22 years.

Experimental Setting and Procedures

The students in the control group completed all post-tests and were then presented with the program. The students in the experimental group first listened to the programs and were encouraged to complete the written post-tests as they completed each segment of the audiocassette tape. They then completed the oral post-tests and the role-played interview. Pre and post-tests were not used in this study. This was done to eliminate practice effects that may have occurred simply by completing the post-tests.

The students in the experimental group completed the audio programs in a controlled setting. This was done to ensure that the programs were utilized in the same way by all participants. All post-tests were the same for both groups. Students in both groups received the same instructions.

The patient in the role-played interview was role-played by a Registered Nurse. She was instructed to play the role of a patient who had just found out she had hypertension and was to quit smoking and begin a sodium reduced diet. She was instructed to display anger if the student asked how she felt about being told to quit smoking. To closed questions she was instructed to respond with a "yes" or "no". To open questions she was instructed to respond with an elaborated answer. Each interview was audiotaped for later analysis. This surrogate patient was asked to fill out a short evaluation of each student after each interview (see Appendix H).

Treatment of the Data

Trainee responses for the oral and written post-tests were independently rated on scales similiar to those developed by Carkhuff (1969 a,b). Rating scales were developed for all three skills.

The development of the scales and the rating of student responses is described in the following sections.

Development of rating scales. The rating scales used to evaluate the programs were based on those developed by Carkhuff (1969 a, b) and utilized by Eustace (1980). Carkhuff developed a 5-point scale. Each point on his scales measured the degree of competence with which skills are utilized. He developed scales to measure empathy, genuiness, positive regard, concreteness, and self-disclousure. Generally a level 3 was considered as being minimally facilitative, a level 1 nontherapeutic, and a level 5 most therapeutic. The adaptation of Carkhuff's scales which were used in this study can be found in Appendix F.

Training of the Judges. Three judges were used to rate all post-tests. Two of the judges were nursing instructors from a school of nursing in greater Edmonton. The third judge was the present author. The judges were trained by the author prior to rating. A description of their roles as raters, along with an explanation of objectivity in rating and possible rater biases were given. The behavioral components of the skills were explained along with the rating scales.

Trial-ratings of sample responses were made until a 95% level of agreement was reached continously by all three judges. Written, oral, and role-play responses of five students were rated together and ratings were discussed to ensure agreement on utilization of the scales between judges. After every ten students were rated for all measures, scales were reviewed to ensure all judges were rating in a consistent manner. Discriminant ratings were discussed at these points.

Ratings. Ratings were conducted in a controlled setting. All raters met and rated the same student responses at the same time. Oral responses and the role-played interviews were presented orally by audiocassette tape. Written responses were rated right on the subject's forms. Two judges were blind to which group they were rating (control or experimental) and to the identity of the subjects. This was to reduce bias due to prior knowledge of the treatment conditions. This was not possible for the third judge (the author) who collected the data from the subjects.
All post-tests were rated at one time for each student. When rating responses to single patient statements, if two responses were given (for example, two questions, one closed and one open) the rating became an overall average of each separate response. An overall rating of the role-played responses for each skill was also arrived at for each student, rather than rating every statement or response made by a student separately. This was done because the role-played interviews varied in length and the raters felt an overall rating for each skill would provide more

consistency and enhance comparison between groups.

Analysis of Data. Correlations were conducted for all post-tests between all three judges. Independent t-tests were computed on the mean ratings for each student and each skill between the two groups. Other analyses included: (a) computation of a Pearson r correlation between written and oral responses, (2) computation of a Pearson r correlation between written and role-played responses, (3) computation of a Pearson r correlation between oral and role-played responses, and (4) an analysis of the data using descriptive statistics.

CHAPTER IV

RESULTS AND DISCUSSION

In the present study the data collected were analyzed using a variety of statistical tests. The first statistical analyses involved calculating inter-rater and intra-rater reliability coefficients for each variable. Second, two-tailed t-tests were used to assess the difference between the scores received by the control group and the experimental group. Third, Pearson Product moment coefficients were calculated to (1) to assess the equivalence of written, and oral responses to single patient statements, (2) to assess the equivalence of oral responses to single patient statements and responses in a role-played situation, and (3) to assess the equivalence of written responses to single patient statements and responses in a role-played situation. The results will now be presented along with the null hypotheses.

Reliability of Raters and Ratings

All responses for each post-test were rated by three judges. A mean rating for each skill and each student was calculated for each judge. The average of the three ratings was taken as the dependent measure.

Reliability coefficients were calculated for the level of agreement between raters.Two methods were utilized to calculate reliability. The first was to calculate inter-rater reliability. Polite and Hungler (1978) stated ; "Interrater reliability is estimated by having two or more trained observers watching some event simultaneously and independently recording the relevant variables according to a predetermined plan or coding system" (p. 431). The mean ratings of each judge were used to calculate a Pearson Product moment correlation. The results shown in Table 3 indicate the reliability coefficients. These results were found to be higher than inter-rater reliability coefficients reported in studies using similar rating scales (Engram & Vandergoot, 1978; Guttman & Haase, 1972). However, Guttman and Haase (1972) and Haase and De Mittia (1972) have reported inter-rater reliability coefficients of .95 for ratings of reflection of feelings. This is similar to the present study. The high reliability coefficients received in this study are likely reflective of slight inflation due to utilizing the mean ratings of judges for calculation. In addition, the three judges were all nursing instructors from the same school of nursing and homogeniety of backgrounds and philosophy could have systematically affected ratings.

The second method used to calculate rater reliability involved finding the intra-rater correlations among the three judges. For this type of reliability each judge's ratings on each variable were correlated with the mean rating of all three judges. The results indicate how closely each judge's

ratings correlate with the overall ratings or dependent measure for each variable. The reliability coefficients for intra-rater correlations are shown in Table 4.

Table 3

Average Inter-rater Reliability Coefficients for Each Program*

Skill	Written Responses	n	Oral Responses	n	Role-Play Responses	n
Open-Ended Questions	.97	40	.99	40	.91	40
Reflection of Feelings	.99	40	.99	40	.99	40
Providing Information	.97	40	.96	40	.95	40

*calculated of the mean rating of each rater for each variable.

Table 4

Average Intra-Rater Reliability Coefficients Among the Three Judges for Each Program

Skill	Written Responses	Oral Responses	Role-Play Responses
Open-ended Questions	.98	.98	.91
Reflection of Feelings	.99	.99	.99
Providing Information	.98	.97	.94

Since one of the judges was the writer, it was felt that intra-rater reliability coefficients for each group should be calculated. This was to demonstrate consistency in ratings between groups since the writer was aware of which group the students were in. It was hoped that no systematic bias would be shown in the ratings between the control and experimental groups. The writer's ratings are shown in Table 5 and listed as Rater #1. Reliability coefficients for Rater 1 are generally higher, or as high, as those of the two other raters. The results suggest that no systematic bias in ratiangs occurred. It was concluded that the judges could very reliably rate responses utilizing the rating scales developed and shown in Appendix F.

Table 5
Intra-Rater Reliability Coefficients Among the Three Judges Calculated For Control and Experimental Groups

Open-ended Questions

Rater	Written		Oral		Role-played	
	Group*		Group*		Group*	
	1	2	1	2	1	2
1	.95	.99	.99	.99	.96	.89
2	.98	.97	.98	.99	.99	.95
3	.92	.99	.99	.99	.97	.95

Reflection of Feelings

Rater	Written		Oral		Role-played	
	Group*		Group*		Group*	
	1	2	1	2	1	2
1	.99	.99	.99	.98	1.0	.98
2	.99	.99	.99	.98	1.0	.98
3	.99	.99	.99	.99	1.0	.98

Providing Information

Rater	Written		Oral		Role-played	
	Group*		Group*		Group*	
	1	2	1	2	1	2
1	.98	.94	.97	.94	.92	.98
2	.99	.98	.98	.88	.93	.97
3	.99	.97	.99	.89	.97	.94

* Group 1, Experimental. Group 2, Control.

Treatment Effects

The first nine null hypotheses to be tested were concerned with treatment effects. These null hypotheses are presented below.

Null Hypotheses #1 states, "The mean ratings of the written responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of written responses to single patient statements made by the control group for the skill of open-ended questions, ($p<.05$)".

Null Hypothesis #2 states, "The mean ratings of the oral responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of oral responses to single patient statements made by the control group for the skill of open-ended questions, ($p<.05$)".

Null Hypothesis #3 states, "The mean ratings of open-ended questions made during the role-play will not be significantly higher for the experimental group than they are for the control group, ($p<.05$)".

Null Hypothesis #4 states, "The mean ratings of the written responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of written responses to single patient statements made by the control group for the skill of reflection of feelings ($p<.05$)".

Null Hypothesis #5 states, "The mean ratings of the oral responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of the oral response made by the control group for the skill of reflection of feelings ($p<.05$)".

Null Hypothesis #6 states, "The mean ratings of the responses that reflected feelings during the role-played interview made by the experimental group will not be significantly higher than they are for the control group, ($p<.05$)"

Null Hypothesis #7 states, "The mean ratings of the written responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of written responses made by the control group for the skill of providing information, ($p<.05$)".

Null Hypothesis #8 states, "The mean ratings of the written responses to single patient statements made by the experimental group will not be significantly higher than the mean ratings of oral responses to single patient statements made by the control group for the skill of providing information ($p<.05$)".

Null Hypothesis #9 states, "The mean ratings of responses that provided information made by the experimental group will not be significantly higher than they are for the control group, ($p<.05$)".

Table 6

Means, Standard Deviations and t Values for Written Responses

	Group 1 (Experimental) Mean	SD	Group 2 (Control) Mean	SD	df	t
Open Questions	2.60	.378	1.765	.43	3	6.49 *
Reflecting Feelings	2.94	.349	1.307	.338	38	15.04 *
Providing Information	2.786	.592	1.811	.420	38	6.01 *

* Two-tailed test, Significant at the .05 level

Table 7

Means, Standard Deviations and t Values for Oral Responses

Skill	Group 1 (Experimental) Mean	SD	Group 2 (Control) Mean	SD	df	t
Open-ended Questions	2.601	.456	1.605	.376	38	7.53 *
Reflection of Feelings	2.957	.440	1.257	.400	38	12.79 *
Providing Information	2.339	.566	1.588	.331	38	5.13 *

* Two-tailed test, Significant at the .05 level

Table 8

Means, Standard Deviations and t Values for Role-Played Responses

Skill	Group 1 (Experimental) Mean	SD	Group 2 (Control) Mean	SD	df	t
Open-ended Questions	2.317	.697	1.533	.584	38	3.85 *
Reflection of Feelings	1.575	.766	1.108	.225	38	2.62 *
Providing Information	3.233	1.142	1.917	.561	38	4.63 *

*Two-tailed test, Significant at the .05 level

Findings. Independent two-tailed t-tests were used to test null hypotheses one to nine. The results are reported in Table 6 (written responses to single patient statements), Table 7 (oral responses to single patient statements) and Table 8 (responses made during the role-played interview). A significant difference was found between the ratings for the experimental and the control groups on all variables ($p<.05$). Since, in each test, the calculated t value exceeded the tabled t value for the .05 level of significance, all null hypotheses, one through nine were rejected.

A difference of approximately one scale point between the experimental and control group was noted for the skill of open-ended questions for written, oral and role-played responses. For the skill of reflection of feelings the ratings of responses made by the experimental group were higher by approximately 1.5 scale points for written and oral responses, but only higher by approximately .5 of a scale point for the responses made during the role-played interview. This result was still significant. For the skill of providing information the experimental group received ratings almost one scale point higher for written and oral responses, and ratings 1 1/3 scale points higher for responses made during the role-played interview.

The standard deviations for the experimental group were generally higher than the standard deviations for the control group. The smaller standard deviations for the control group are likely due to the fact that students in this group uniformly responded in what was considered a non therapeutic manner (levels 1 or 2). The scores of the experimental group showed more variablity, perhaps indicating that the self-instructional method utilized was not as effective for some students' learning as it is for others. The skill showing the largest standard deviation was that of providing information during the role-played interview for the experimental group. The ratings of these responses ranged from a low of Level 1 to a high of Level 5 which accounts for the large standard deviation. Again this may be due to the fact that self-instructional strategies may not have been the most effective for some students. However, other factors could also account for the large variability. Factors involved with talking to a surrogate patient such as nervousness, or anxiety may have affected responses. The lowest standard deviation was found in the control group for the skill of reflection of feelings in the role-played interview. This was accounted for by the fact that very few students (4) out of 20 even mentioned feelings despite being maximally cued to.

Null Hypothesis #10 states, "The mean ratings of the surrogate patient on how well she felt the students tried to understand her feelings will be no different for the control group and the experimental group ($p<.05$)".

Finding. An independent t-test was used to test this null hypothesis. The result is reported in Table

9. A significant difference was found between the experimental and the control group for this measure. The surrogate patient rated the experimental group at a mean level of 3.20 and the control group at a mean level of 2.5. The standard deviation for the experimental group was smaller than the standard deviation for the control group on this variable. It was concluded that even though the responses of the experimental group were rated low by the judges, that the patient felt this group generally tried to understand her feelings more so than the students in the control group. Thus, null hypothesis #10 was rejected.

Null Hypothesis #11 states, "The mean ratings of the level of teaching provided by the experimental group will not be significantly different than the mean ratings of the control group as rated by the surrogate patient ($p<.05$)".

Findings. Again, an independent t-test was used to test this null hypothesis. Results are found in Table 9. No significant difference between group ratings by the surrogate patient was found. Null hypothesis #11 was not rejected.

Null Hypothesis #12 states, "The mean rating made by the surrogate patient on the level of comfort of the role-played interview will not be significantly different between the experimental and control groups ($p<.05$)".

Findings. An independent t-test was used to test this null hypothesis. Results are found in Table 9. No significant difference was found between group means as rated by the surrogate patient. Null hypothesis #12 was not rejected.

Null Hypothesis #13 states, "The mean rating by the surrogate patient of the students' overall ability to communicate will not be significantly different between the experimental and control groups ($p<.05$)".

Findings. An independent t-test was used to test this null hypothesis. Results are found in Table 9. No significant difference between the patient's ratings of the students in theexperimental and control groups was found. Null hypothesis #13 was not rejected.

In these subjective patient ratings the experimental group was not rated higher than the control group on three out of four variables. This may be due to the fact that many other variables come into play in interactions with another that cannot be measured by ratings of verbal responses alone. Eye contact and other nonverbal cues may alter a patient's perception of a student's ability to

communicate. These were not rated by the judges due to the format of the study. In addition the reliability of one rater (the surrogate patient) is likely to be lower than if more than one rater was utilized.

Table 9

Means, Standard Deviation and t Values for Subjective Patient Ratings

Variable	Group 1 (Experimental) Mean	SD	Group 2 (Control) Mean	SD	df	t	p*
Felt feelings were understood	3.20	.894	2.50	1.100	38	2.21	.03
Level of teaching perceived	3.350	.875	3.150	.813	38	.75	.46
Comfort level of conversation	3.10	.788	2.60	1.231	38	1.73	.13
Overall Patient Rating	3.30	.923	2.75	.851	38	1.96	.06

* Two-tailed test

Equivalency of Measures

Null Hypothesis #14 states, "There will be a zero correlation between written responses and oral responses for the skill of open-ended questions ($p<.05$)".
Null Hypothesis #15 states, "There will be a zero correlation between written responses to single patient statements and role-play responses for the skill of open-ended questions ($p<.05$)".
Null Hypothesis #16 states, "There will be a zero correlation between oral responses to single patient statements and role-play responses for the skill of open-ended questions ($p<.05$)".
Null Hypothesis #17 states, "There will be a zero correlation between written responses and oral responses to single patient statements for the skill of reflecting feelings ($p<.05$)".
Null Hypothesis #18 states, "There will be a zero correlation between written responses to single patient statements and role-played responses for the skill of reflection of feelings ($p<.05$)".
Null Hypothesis #19 states, "There will be a zero correlation between oral responses to single patient statements and role-played statements for the skill of reflection of feelings ($p<.05$)".
Null Hypothesis #20 states, "There will be a zero correlation between written responses and oral responses to single patient statements for the skill of providing information ($p<.05$)".
Null Hypothesis #21 states, "There will be a zero correlation between written responses to single patient statements and role-played responses for the skill of providing information ($p<.05$)".
Null Hypothesis #22 states, "There will be a zero correlation between oral responses to single patient statements and role-played responses for the skill of providing information ($p<.05$)".

Findings. Pearson product moment coefficients were calculated between (a) written and oral responses to single patient statements, (b) written responses to single patient statements and role-play responses, and (c) oral responses to single patient statements and role-play responses for each skill, each group and for the total group. The results are reported in Table 10, Table 11, and Table 12.

Overall correlations for both groups were significantly different from zero on all measures except for the correlation between oral responses to single patient statements and role-played responses for the skill of open ended questions. Therefore, all null hypotheses except #16 were rejected. However, correlations calculated separately for the control and the experimental groups were not consistently different from zero. These are reported in tables 10,11, and 12.

Table 10

Correlations Between Ratings of Written, Oral and Role-Played Responses for Open-Ended Questions

	n	Written & Oral Single-Patient Responses	Role-Play & Written Single- Patient Responses	Role-Played & Oral Single-Patient Responses
Group 1 (Expermental)	20	.30	-.067	-.027
Group 2 (Control)	20	.564*	-.064	-.350*
Overall Correlations	40	.73*	.33*	.31

* Significant at .05 level

Table 11

Correlations Between Ratings of Written, Oral, and Role-Played Responses for Reflection of Feelings

	n	Written & Oral Single-Patient Responses	Written Single- Patient Responses and Role-Play Responses	Oral Single-Patient Responses & Role-Played Responses
Group 1 (Experimental)	20	.611*	.149	-.025
Group 2 (Control)	20	.146	.183	.213
Overall Correlations	40	.89*	.410*	.361*

*Significant at .05 level

Table 12

Correlations Between Ratings of Written, Oral and Role-Played Responses for Providing Information

	n	Written & oral Single-patient Responses	Written Single-Patient Responses and Role-Play Responses	Oral Single-Patient Responses and Role-Play Responses
Group 1 (Experimental)	20	.442*	.670*	.492*
Group 2 (Control)	20	.350	.215	.106
Overall Correlations	40	.67*	.73*	.63*

*Significant at .05 level

Descriptive Statistics

In this section the data are described as the percentages of subjects in each category. The categories involved are the levels reached in the scales utilized for ratings.

Experimental and Control Group Measures

Post-treatment measures consisted of ratings on a five-point Carkhuff-type scale. The levels in the scale indicate the level of competence reached. A level 1 was assigned when raters felt the student demonstrated no ability to effectively utilize each skill. A level 3 was assigned when minimal competence was demonstrated in the utilization of each skill. A level 5 was assigned when the student demonstrated outstanding competence in his or her ability to utilize the skill (see Appendix F for the full rating scales). A frequency count was made of each subject's mean score for each skill for both groups. These frequencies are reported as percentages of the total number of subjects in each group (n=20) in Table 12. The ratings were reported for written, oral, and role-played responses.

The majority of subjects in the experimental group were rated at a level 3 , whereas the majority of subjects in the control group were rated at levels 2 and 1 (for reflecting feelings). For the skill of providing information in the role-played interview 20% of students in the experimental group were rated at level 5. No other ratings at level 5 were obtained. In the control group no ratings at level 4 or 5 were obtained.

Patient Subjective Evaluation

The surrogate patient was asked to rate students on 4 items after each interview. She rated students on a Likert scale for each variable. She was blind as to which group she was rating.

The questions and percentages of students rated at each point are reported in Table 15 for both the experimental and control group. Generally, the surrogate patient rated students in the experimental group higher than those in the control group.

Summary of Results

Inter and intra-rater reliability coefficients were calculated between the three judges and found to be adequate. The difference between the experimental and control group responses

were then tested using independent two-tailed t-tests. The ratings for the experimental group were found to be significantly higher than the ratings for the control group on all variables. The relationship between written, oral, and role-played responses was then examined. It was found for both groups together (n=40) the relationship between written and oral responses, written and role-played responses, and oral and role-played responses were all significantly greater than zero, except for the relationship between oral and role-played responses for the skill of open-ended questions. However, this was also a positive correlation. The relationships between types of responses when examined separately for each group were variable. A few were significantly greater than 0 (written and oral responses for open-ended questions, control group; written and and oral responses for reflecting feelings, experimental group; and all measures for the skill of providing information, experimental group). Four correlation coefficients were negative (written and role-played responses and oral and role-played responses for both groups for the skill of open-ended questions, and oral responses and role-played responses for the skill of reflecting feelings).

Using descriptive statistics, frequency counts indicated that the majority of students in the experimental group were rated at a level 3 for responses, while the majority of those in the control group were rated at a level 2 (and 1 for reflecting feelings). Subjective evaluations of the surrogate patient rated 65% of the students in the experimental group at a level 3, whereas she rated only 50% of those in the experimental group at a level 3. Overall, she rated most students in the experimental group in the top two-thirds, whereas she rated most of those in the control group in the bottom two-thirds of her scales.

Table 13

Percentage of Subjects in Each Category for Open-Ended Questions

	Group 1 (Experimental)			Group 2 (Control)		
	Written	Oral	Role-Play	Written	Oral	Role-Play
Level 1	0%	0%	10%	30%	30%	45%
Level 2	40%	40%	50%	70%	70%	45%
Level 3	60%	55%	35%	0%	0%	10%
Level 4	0%	5%	5%	0%	0%	0%
Level 5	0%	0%	0%	0%	0%	0%

Table 14

Percentage of Subjects in Each Category for Reflection of Feelings

	Group 1 (Experimental)			Group 2 (Control)		
	Written	Oral	Role-Play	Written	Oral	Role-Play
Level 1	0%	5%	45%	70%	80%	80%
Level 2	10%	0%	40%	30%	15%	20%
Level 3	90%	85%	10%	0%	5%	0%
Level 4	0%	0%	5%	0%	0%	0%
Level 5	0%	0%	0%	0%	0%	0%

Table 15

Percentage of Subjects in Each Category for Providing Information

	Group 1 (Experimental)			Group 2 (Control)		
	Written	Oral	Role-Play	Written	Oral	Role-Play
Level 1	0%	5%	10%	25%	35%	20%
Level 2	35%	55%	10%	65%	60%	60%
Level 3	50%	40%	40%	10%	5%	20%
Level 4	15%	0%	20%	0%	0%	0%
Level 5	0%	0%	20%	0%	0%	0%

Table 16

Percentage of Subjects in Each Category on Subjective Ratings by the Surrogate Patient

	Group 1 (Experimental)			Group 2 (Control)		
Question	Not at all	Somewhat	Definitely	Not at all	Somewhat	Definitely
1. Did this student try to understand your feelings using the skills taught?	5%	80%	15%	35%	60%	5%
2. Did the student teach about a low salt diet well?	0%	75%	25%	5%	80%	10%
3. Did the interview feel natural?	5%	85%	10%	35%	55%	10%

4. On a five point scale with 5 being outstanding, how would you rate this student's ability to communicate?

Group 1 (Experimental)					Group 2 (Control)				
1	2	3	4	5	1	2	3	4	5
0%	10%	65%	0%	20%	5%	35%	50%	5%	5%

Discussion

The results of the present study clearly indicated that the self-instructional programs were effective in producing change in the defined skills in a very short period of time (15 minutes per skill). The following discussion considers some possible factors that influenced the effectiveness of the programs.

Order of Skill Presentation

The order in which skills were presented to the experimental group may have influenced the responses they made. It was felt important when producing the programs on audiocassette tape that the least complex skill should be presented first. This was open-ended questioning. This was done to increase the comfort level of the student with the type of instruction. Second, the skill of reflection of feelings was presented. This skill was considered to be slightly more complex in that it required the student to interpret the patient's statements and extract a feeling before responding. The skill presented last was considered the most complex. This was the skill of providing information. To utilize this skill the student needed to judge how to best answer the patient's questions using background information provided. Eustace (1980) noted from his study that the first program presented should be one that is least complex to maximize learning and decrease anxiety created by novel and difficult situations.

In the present study the dependent measures, written, oral, and role-played responses were also arranged in a hierarchical order. Written responses to single patient statements were completed first by all students. Second, oral responses to single patient statements presented on audiocassette tape were completed. Finally, the students completed a role-played interview with a surrogate patient. It was felt that this order of dependent measures would also help reduce anxiety that is created by threatening and novel situations. Written responses were considered the least threatening and were presented first to help students develop awareness of expectations. The oral responses were completed second with the student being alone in the room. This was done to decrease anxiety that might be created by the writer's presence. Lastly, the student interviewed the surrogate patient. The instructions were left with each student and provided the necessary information to be taught. This was done so that memory was not measured. Therefore, the programs and dependent measures were all arranged from least complex to more complex and from least threatening to more threatening to enhance the effectiveness of the programs and to help eliminate anxiety that may affect responses made by students. The results indicate that levels of

responses received by the students were not systematically lower as the complexity of measurement and skill increased. Therefore the order of presentation of skills and dependent measures appears to have been a positive factor in this study.

Post-Treatment Measures

One factor in the post-treatment measures that may have affected responses was the timing of the post-test oral responses presented on the audiocassette tape. Students in the control group uniformly stated that the 15 second pause between patient statements was not enough time to adequately respond. Perhaps the levels of responses received by this group on oral post-tests would have been higher if more time had been given. However, the students in the experimental group did not feel the 15 second pause was too short. Only one student stated she did not have enough time to complete her responses. This result could also lend support to the effectiveness of the self-instructional programs. The students in the experimental group were more confident in making responses and could quickly assess a situation and respond appropriately for the most part. Those in the control group had a great deal of difficulty assessing a situation and determining how to respond. Total testing time, including time spent afterwards listening to the audiocassette programs for the control group averaged one and one-half hours, whereas students in the experimental group usually completed the program and all post-tests within one hour and ten minutes.

Program Effectiveness

One factor in the programs that likely affected the level of responses made by the students in the experimental group was the level of responses modeled in the programs. Within each program, level 3 and sometimes level 4 responses were modeled. It was felt that levels 4 and 5 were too complex and would thus be confusing for novice interviewers. This likely affected the student's responses on post-test measures. For the skill of open-ended questions and reflection of feelings students' responses from the experimental group were generally rated at level 3 for responses to individual patient statements. For role-played responses, for these two skills the experimental group was generally rated at a level 2. For the skill of providing information more variability in the three outcome measures was found. For written responses to single patient statements students in the experimental group were generally rated at a level 3, whereas for oral responses to single patient statements more students were rated at a level 2. Strangely, in the role-played interview for the skill of providing information more students in the experimental group were rated in the upper 3 levels (most at level 3). This skill was modeled at a higher level in the interview on the audiocassette

tape than it was in response to individual patient statements. Therefore the level of modeling in the interview on tape could have affected the level of responses demonstrated by students in their interview. As well, the level of modeled responses to separate patient statments affected the level achieved by students in response to separate patient statements. This skill it seems, is not only easier to model in an interactive interview, it is also easier for the students to utilize in an interactive interview.

It was found when analyzing student responses, that the modeled responses had a dramatic effect on the responses made by the student. Many times the students (in the experimental group) were noted to utilize the exact same statements that were modeled. Two students utilized the exact same reflection of feelings modeled in the program in response to an oral single patient statement, even though the feeling mentioned was not appropriate.

In summary, the level of modeling in the programs affected the level of response achieved by the experimental group. No students were able to move beyond the highest level modeled for the skills. However, the programs were effective to teach students in the experimental group to respond at a level 3 whereas the students in the control group responded at levels 1 and 2.

Equivalence of Written, Oral, and Role-play Measures

If these three types of responses were equivalent in what they measured, then a high correlation between them would be expected. Although for both groups together all correlations were significantly different from zero, except one, (see Tables 10, 11, and 12) they were not high. The correlations between written and oral responses to single patient statements were higher than those between either of these two and role-played responses. It seems then, that role-played responses measure utilization of skills that are quite different from responses to single patient statements. It is likely that many other factors affect how a student will respond when interacting with a patient. This last outcome measure may be more reflective of the level of responses the students would use when interacting with a real patient. Therefore when evaluating program effectiveness the outcome measures cannot be used interchangeably. From written and oral responses to single patient statements it appeared that students could effectively utilize skills taught. However, whether or not they chose to use these in the role-played interview varied.

Subjective Patient Evaluation

The ratings made by the surrogate patient tended to be more lenient than those made by the judges. She tended to rate most students in the middle of her scales. However, this was likely affected by the fact that she had a scale that measured ability in terms of "not at all", "somewhat", or

"definitely" except for "overall ability " in which her scale ranged from level 1 to level 5. Her ratings seemed to be affected by other factors not measured in verbal responses as rated by the judges. Personality, nonverbal messages, physical appearance and other factors not obvious to the judges may have affected her ratings. This would, in part, account for the differences between her ratings of the students' ability to utilize the skills and the judges' ratings.

Qualitative Observations

Further to the quantitative observations already reported some qualitative findings of the outcome of the program should be noted. These are described in the following two sections.

Responses to Single Patient Statements. When comparing responses of the two groups to single patient statements differences were found that were not specifically measured by the rating scales, or taught in the programs. For example, students in the control group were found to give responses that provided advice or false reassurance, ignored or negated feelings, and were confusing. This group generally responded in terms of "we" rather using personal pronouns. They also tended to refer to the necessity of the patient needing "a positive attitude" in their responses. For example, they were more likely to respond in a similar way to "If you have a positive attitude, things will work out". Their responses were longer in length and the meaning they were trying to get across to the patient was usually unclear in these lengthy responses. They were also more likely to stammer, use "um..." and sound more anxious in oral responses. One last and rather disturbing qualitative observation was that students in the control group were more likely to "make-up" answers to patient statements if they did not know an answer. For example for the skill of providing information the students were all supplied with the same background information. One part of this was that the patient would have a lung scan to help isolate a tumor. On the test tape the patient asked what the lung scan was for. Even though this information was provided, some students in the control group went beyond this and provided totally inaccurate information. One student reponded, "Well, they are going to inject a solution into your lungs and this will cause you to have trouble breathing". Another responded, "They will remove the tumor through this".

Of the students in the experimental group qualitative observations of aspects of communication in that were not directly taught via the audiocassette programs included the following. These students were more likely to talk in terms of "I" rather than "they or we". Their responses were shorter and less confusing as to the meaning. More confidence was noted in their voice and delivery of responses. Lastly, the students in this group were less likely to "make-up" stories and more likely to respond that they didn't know an answer.

Responses in Role-Played Interview. Further qualitiative observations were made during the role-played interviews. First, although the programs did not directly teach listening skills, students in the experimental group were more likely to stop and listen to the role-played patient. They seemed less anxious to get to the "teaching" and more likely to talk with the role-played patient. The length of the interviews of students in the experimental group were generally longer than the length of those in the control group. Students in the control group were more likely to read the information provided on the instruction sheet, whereas students in the experimental group were more likely to read the sheet first and then put it aside for referral if needed. Then they attempted to talk "with" the patient rather than "to" the patient.

These qualitative observations lend support to the effectiveness of the programs, not only to teach the skills, but to enhance a student's ability to extract extraneous variables in therapeutic communication and utilize these. This supports the conclusion that skills taught by the self-instructional programs can generalize, at least to role-play situations.

Summary of Discussion

A number of factors appear to influence the effectiveness of the programs. Those hypothesized included order of skill presentation, as well as outcome measures, level of modeled responses and variables not measured by the rating scales in this study but extracted by the students from the programs. Overall, the self-instructional program presented in a controlled setting individually to each student produced responses which were considered minimally facilitative and were significantly better than responses made by the students in the control group. The programs did not bring students in the experimental group to a level which is considered "outstanding", however the intention of these programs was to produce levels of responses which were considered to be minimally facilitative. Results of different outcome measures suggest that written, oral and role-play responses are not equivalent. It seems that if intentions of a program are to teach students how to communicate with others, then the most appropriate measure should be an interactive measure. Lastly, qualitative observations of responses made by students indicate that even though three separate skills were taught in isolation, the students extracted and utilized other aspects that are considered therapeutic. Examples of these included more listening skills and utilization of personal pronouns in their statements.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this chapter a brief summary of the study and results is given. Limitations and implications of the study and suggestions for further research are also given.

Summary of Study and Results

The first major objective of the present study was to develop and produce self-instructional audiocassette programs following the Calder model, for the skills of open-ended questions, reflection of feelings, and providing information. Program development involved writing scripts for the programs and then producing the programs on audiocassette tape.The second major objective was to evaluate the effectiveness of the three programs with nursing students. A third objective was considered relevant to this study. This involved determining whether there was a relationship between written and oral responses to single patient statements and whether either of these two measures were equivalent to responses made during a role-played interview.

The data collected included six written responses to six written patient statments and six oral responses to six patient statements presented on audiocassette tape for each skill. In addition, the students were asked to use all these skills in a role-played interview and these were audiotaped for analysis. Lastly, the surrogate patient rated each student on a rating scale consisting of four items. Three judges then rated all responses on a Carkhuff-type five-point scale for each skill. The mean rating of all three judges on nine variables was used for statistical analysis. This consisted of, (a) independent *t*-tests calculated between means of both groups, (b) Pearson r correlations between written and oral responses, written and role-played responses and oral and role-played responses, and (c) descriptive statistics showing percentage change. A .05 level of significance was considered necessary for rejection of null hypotheses.

The statistical results, reported in the previous chapter, demonstrated that the judge's rated the responses of students in the experimental group significantly higher than the responses of those in the control group. The surrogate patient rated the students in the experimental group as higher than the control group on one variable. This was that she felt that this group tried to understand her feelings more so than students in the control group. Frequency counts indicated that most students in the experimental group were rated at a level "three" on most variables, whereas those in the control were rated at levels "one" and "two". The ratings of the patient placed approximately two-thirds of the experimental group in the upper half of her scales, whereas she

rated two-thirds of the control group in the bottom half of her scales.

The correlations between all variables for the total sample were all significantly greater than zero except for the correlation between oral and role-play statements for the skill of open-ended questions. However, correlations computed between post-test measures for each group separately indicated much more variability. Correlations significantly different from zero were found between five post-test measures (written and oral for the control group for open-ended questions, written and oral for the experimental group for reflection of feelings, and between all post-test measures for the experimental group for the skill of providing information).

Conclusions

The primary purpose of this study was to produce an effective and efficient program to teach specific communication skills to nursing students. The results indicated that this objective was achieved with a significant degree of success. Carkhuff (1969 a, b) suggests that a level 3 is considered minimally facilitative in therapeutic communication. Assuming that the scales constructed by the author are similar to Carkhuff's scales, the students who received the training via the self-instructional programs were able to demonstrate the ability to utilize the three skills at a level of 3. However, once they were in an interview situation with a surrogate patient whether they chose to use the skills at this level or not varied. Most students did not demonstrate the skill of reflection of feelings at a level 3 when with the surrogate patient.

Although there are various approaches for teaching communication skills to nursing students, the use of the Calder model has a number of advantages. A major advantage is that students can be brought to minimal levels of competence in skill delivery in a very short period of time. No instructor supervision or involvement is necessary to do so. Therefore, cost effectiveness is greatly entranced with this method. In comparison, regular microcounseling techniques (Ivey & Authier, 1978) require instructor supervision and feedback, as well as more expensive and elaborate equipment. Although the two programs may not be directly comparable, the Calder model does provide a short, effective method of instruction. Using his model in a strictly self-instructional format has additional advantages. Students can complete the programs at their own speed and review as many times as necessary.

Limitations

Various limitations of the present study were noted. Firstly, the sample utilized in this study were volunteers. As such, the sample was likely biased since volunteers differ from nonvolunteers

(Borg & Gall, 1983). For example, volunteers in this study may have differed from those who did not volunteer in several characteristics. Borg and Gall (1983) note that volunteers tend to be more intelligent than nonvolunteers. Therefore, the degree of learning from the self-instructional tapes may differ with the present sample than it would if this method was used in a regular classroom. Volunteers also tend to have a higher need for social approval, and tend to be more sociable than nonvolunteers. Both of these could have affected the results of the study, especially the role-played interviews. Other factors found with volunteers that may limit generalization of results to other populations include: volunteers tend to be more altruistic, self-disclosing, younger, more anxious, and more extraverted than non-volunteers (Borg & Gall, 1983). One last, and perhaps most important in this study is that volunteers tend to be more motivated (Borg & Gall, 1983). This alone could account for the degree of learning that occurred with a self-instructional method of teaching. It is quite likely that the self-instructional strategy would not be effective with those less motivated.

Another bias could have arose from the school of nursing from which the sample was selected. Selection processes for admission into this school of nursing could have produced a biased student population. The school of nursing is associated with a Catholic Hospital. The students who apply to such a school of nursing for admission may differ from those who apply to other schools of nursing.

Another limitation may have arose from the contrived situation (the role-play) utilized for a post-test. The role-play situation was artifical and therefore may not given an accurate indication of how the students would behave in a natural situation. However, Borg and Gall (1983) note, "In using role-playing situations in research, however, the authors have been impressed by the degree to which subjects appear to forget that they are involved in an artificial situation" (p. 502). Use of an artificial post-test has advantages, however, does limit external validity and generalization of results.

Another limitation of this study was that the self-instructional programs were presented in a controlled environment. Ideally, to use the self-instructional method of teaching, students should be able to complete the programs at their own speed and time. This may have provided more variability in outcome measures. Novelty of the self-instructional tapes may also create a limitation. Students unfamiliar with this type of instruction may have been caught up in the novelty of it. If this was adopted as a regular part of the curriculum, desensitization and boredom may affect the degree of learning (Borg & Gall, 1983).

Finally, only three skills were taught. Many more exist and a variation in the therapeutic effectiveness of the skills taught occurs in actual practice. For example, closed questions are more effective when specific information is sought, and in fact, can be used effectively in patient teaching

to "check out" the degree of understanding. One of the most useful closed questions in patient teaching is, "Do you have any questions?" Therefore, a limitation of this study arises from teaching the three skills in isolation. Ivey (1983) feels that a separate microcounseling session on "combining skills" is necessary after single skills are taught. This needs to be considered when using the Calder model as well.

Implications

A number of implications of the present study are evident. This method of instruction in this study was shown to be effective for the three skills taught. The level of competence reached was considered to be minimal, however. It is likely that a series of progressively higher levels of modeled responses would produce higher levels of trainee responses. Also, it is likely that the Calder model could be utilized to design programs to teach other skills such as reflection of meaning, confrontation and self-disclosure. This model could also be utilized to construct programs for skills utilized with specific populations. Examples may be pediatric patients or dying patients. Programs could also be constructed to teach specific programs such as how to teach a diabetic patient or pre-operative instruction. Finally, if videocassette tapes were utilized, variations in the Calder model could also be used to teach specific psychomotor skills necessary for nursing students to learn. Examples of this might be dressing changes, wound irrigations, and suture removals.

The programs have already been used to teach counseling skills to undergraduate students, beginning masters level counselors, teachers, and nursing students. The programs might well be used in other settings, with other populations and even expanded to teach other psychomotor skills such as those described above. Further applications might be made in teaching psychiatric patients assertiveness training, officers of the law how to communicate with prisoners, or even sales personnel. The possibilities are seemingly limitless.

In summary, the following suggestions were made for further research:

1. Develop programs that progressively teach skills at higher levels of competence.
2. Develop specific programs for specific patient populations such as psychiatric patients, pediatric patients or dying patients.
3. Develop programs to teach other psychomotor skills necessary for nursing students to learn.
4. Evaluate the effectiveness of specific programs in real-life encounters with patients or clients. This may provide a more accurate measure of generalization of skill acquisition to practice.
5. Develop programs geared towards other professions such as officers of the law or sales-persons.

The present study has focussed on the development and evaluation of three programs to teach three specific skills. The results suggest that these programs, or others like them can effectively be used as part of a nursing education curriculum. The present author would like to conclude that proficiency in communication is necessary for nurses, but it is only a part of the repertoire of skills needed. Effective utilization of skills is not the most important quality of nurses or of those in helping professions. Carl Rogers (1958), once observed that it didn't seem to make much difference how the helper behaved as long as his or her intent was to be helpful. Of course, what we believe utlimately determines the techniques we employ when dealing with people. Therefore effective utilization of communication skills becomes only a part of effective helping.

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APPENDIX A

TRANSCRIPTS

SELF-INSTRUCTIONAL PROGRAMS

SELF-INSTRUCTIONAL PROGRAMS

This program is designed to teach three communication skills commonly used in nursing. These are the skills of open questioning, reflecting feelings and patient teaching. One skill at a time will be presented. This may seem artificial, and in fact when you communicate with a patient you will use more than one skill at a time. The purpose in presenting one skill at a time is to help you thoroughly learn each skill.

The following sequence will occur for each skill. You are encouraged to complete each skill at one setting. Between skills you may want to take a break and complete the written exercises provided. First, a brief description of each skill will be provided. Then, in two role-played interviews you'll hear each skill used, both in a positive way and in a way that is not helpful. A short discussion will point out the difference between interviews. Third, each skill will be presented in response to six separate patient statements. Fourth, you'll get a chance to practice. A patient's statement or question will be presented and you'll have fifteen seconds to make your own response. Say it out loud. This helps you practice. Then compare your response to the one that follows. Fifth, you'll hear six patient statements or questions. This is for your practice. Respond using the skills that you've learned.

Open Questions

Narrator: The first skill to be presented is that of open questioning. This skill is commonly used to help the nurse gather information and to encourage the patient to talk freely and openly about thoughts and feelings. In the first interview listen carefully to the questions the nurse uses. Note how they are designed to get more than a one or two word response from the patient.

Nurse: Mr. Stewart, could you tell me why you came into hospital?

Patient: Well, I'm supposed to have an operation I guess.

Nurse: Why type of operation?

Patient: It's my gallbladder. The doctor said I had to have it out. It's been acting up.

Nurse: How has it been acting up?

Patient: Well, when I eat certain foods I guess I get a terrible pain. Sometimes it's really bad.

Nurse: How long has this pain been happening?

Patient: I guess about a year now. It's just become worse this last month or so.

Nurse: How do you feel about being in hospital?

Patient: I shouldn't be here you know. I'm a farmer and it's near harvest time. I have all my crops in the field and can't afford to be here.

Nurse: How is the farm being cared for now?

Patient: My wife and oldest son are doing the work. I really feel bad because the work is too much for them. I feel like I've abandoned them.

Nurse: When did your doctor say you could work again?

Patient: Probably not for two or three months. So my wife and son will have to do all the work.

Nurse: How do you think your wife and son feel about doing more work?

Patient: Well, I suppose they don't mind. My wife understands I have little choice right now. She's pretty good, you know. And my son knows what to do and helps out a lot.

Narrator: Now note how the nurse's questions encouraged the patient to respond with more than one or two words. Her questions generally began with "What, Who, How" and she also could have began her questions with used "Where, Tell me about, Could or Would you tell me". These are all designed to elicit more elaborate responses. Note also how this nurse presented only one question at a time to Mr. Stewart. Now let's listen to a conversation in which open questions are not used. Note that if the patient answered her questions literally he would only have to provide a one or two word response.

Nurse: Mr. Stewart, why did you come to the hospital?

Patient: Because my doctor said to.

Nurse: Did he give you a reason?

Patient: Yes.

Nurse: Was it for surgery?

Patient: Yes.

Nurse: On what?

Patient: My gallbladder.

Nurse: Are you frightened about surgery?

Patient: No.

Nurse: Is something else bothering you?

Patient: No - I guess not.

Narrator: Now, can you see the difference? This nurse used closed questions and Mr.Stewart answered "yes or no" without elaboration. She learned little about Mr. Stewart from this interaction. She also asked him "Why he was in hospital". This "why" question seemed to put him on the defensive and he needed to come up with a rationale as to "why" he was here.Now you'll hear the same skill modeled in response to six separate patient statements.

Patient: I'm sure having a lot of pain.
Nurse: What type of pain are you having?

Patient: I don't know about this surgery I'm supposed to have.
Nurse: How do you feel about the surgery?

Patient: I'm really scared.
Nurse: What is scaring you?

Patient: I'm supposed to have an EEG tomorrow.
Nurse: What do you know about an EEG?

Patient: My doctor told me I can't go back to work.
Nurse: How do you feel about that?

Patient: I've never been in a hosptial before.
Nurse: How do you feel about being here?

Narrator: Now you'll get a chance to practice. A patient's statement will be given and a fifteen second pause will give you a chance to make your own open question. Say it out loud and then compare yours to the one that follows.

Patient: I want to go home.
Nurse: What makes you want to go home?

Patient: My stitches are hurting.
Nurse: Where are they hurting?

Patient: I felt scared when I got out of bed.
Nurse: Tell me about what frightened you.

Patient: I would like some answers from somebody!
Nuse: What are you concerned about?

Patient: I'm scared I'm dying.
Nurse: Tell me what it's like for you.

Patient: I'm afraid of pain killers.
Nurse: What frightens you about pain killers?

Patient: It's so hard to get old.
Nurse: Tell me what it feels like.

Patient: I'm scared of these funny reactions I'm having.
Nurse: Could you describe these reactions?

Patient: My family doesn't seem to understand.
Nurse: Tell me about your family's reactions.

Patient: I'm so lonely.
Nurse: Could you tell me about your loneliness?

Patient: I wish I were young again.
Nurse: What would you like to bring back from the past?

Patient: I wish it was all over. I'm tired of this.
Nurse: Tell me what it's been like for you.

Narrator: Now, you'll get a chance to practice on your own. For these next six patient statements state your open question out loud. You'll be given 15 seconds to make your statements.

Patient: Nurse, I don't want to go to a nursing home.
Patient: I'm sure worried about my children at home.
Patient: My doctor doesn't tell me enough.
Patient: I don't want anymore tests.
Patient: I'm fed up with staying in this bed.
Patient: I feel like a weight has been lifted from my shoulders.

Narrator: This is the end of open questioning. You may want to take a break and complete written exercise number one, or go on to the next skill.

Reflecting Feelings

Narrator: The second skill to be covered is that of reflecting feelings. This skill is a very useful skill that communicates to your patient that you are trying to understand him or her. This skill involves expressing in fresh words the patient's feelings either stated or implied. Let's listen to a nure using this skill effectively. Note how she correctly identifies the patient's feelings and expresses this to him.

Patient: Nurse, I'm really scared about tomorrow.

Nurse: You're frightened about your surgery?

Patient: Yes, I don't know what to expect. I might have cancer. The doctor said there's a 90 percent chance.

Nurse: And you're pretty scared right now.

Patient: Yes, if it's cancer he said I'll need radiation and I've heard people lose their

hair and get really ill.

Nurse: You're frightened this will happen to you.

Patient: Yah, I've got my whole life ahead. I'm supposed to be married in two weeks. My wife wants kids you know. Now she may not even want me.

Nurse: You're afraid of her reaction.

Patient: Yeah - I'll only be half a man and a bald one at that!

Nurse: You're feeling cheated.

Patient: It's not fair. Why me?

Nurse: It's frustrating and scary for you.

Patient: Yes. I just wish tomorrow was over. I guess I'll have to wait and see.

Narrator: Notice in this conversation that the nurse correctly identified the feelings the patient was experiencing she reflected these back to him to show him she understood and also to encourage him to talk more about them. She identified feelings that were expressed and feelings that underlied the patient's statements. Her words were appropriate for the patient's feelings. Now let's hear the same skill modeled in an ineffective way. Note the inaccuracy and/or overinterpretation of this nurse's reflections.

Patient: Nurse, I'm really scared about tomorrow.

Nurse: You're horrified.

Patient: Well, no, yes ... I'm scared.

Nurse: You're confused.

Patient: No, I'm not, I'm scared. I might have cancer.

Nurse: You're feeling hopeless.

Patient: Not yet ... I'm hoping I don't have cancer. There's a 10 percent chance I don't have cancer.

Nurse: You're glad there's a 10 percent chance.

Patient: Well 10 percent is not much you know!

Nurse: You sound angry now.

Patient: Oh, ... just leave me alone!

Narrator: This nurse did not effectively reflect feelings. Note the adjectives she used were inappropriate or overinterpreted. This patient ended up feeling frustrated and her

reflections certainly did not help her understand.

Now the skill will be modeled in response to six separate patient statements.

Patient: I'm so sick and tired of being here!
Nurse: You're fed up.

Patient: This pain keeps coming back no matter what they do.
Nurse: You're feeling frustrated.

Patient: If only I had followed my doctor's orders...
Nurse: You're feeling guilty.

Patient: No one ever comes to visit me.
Nurse: You're lonely.

Patient: Just leave me alone. I've had enough!
Nurse: You're tired of it all.

Patient: I'm sure glad the operation is over.
Nurse: You're relieved right now.

Narrator: Now you'll get a chance to practice. Again, say your response out loud and compare them to the ones that follow. You'll have fifteen seconds to reflect this patient's feelings.

Patient: I've never been in hospital before.
Nurse: You're unsure of being here.

Patient: What do you know, you're not stuck in this bed!
Nurse: You're angry.

Patient: I haven't got a hope.
Nurse: It seems bleak for you.

Patient: If only I had more time.
Nurse: You're feeling pressured.

Patient: Hey, maybe this new drug will work.
Nurse: You're feeling hopeful.

Patient: I'm feeling okay, really I am (crying).
Nurse: You're crying and actually feeling sad.

Patient: I'm sorry I yelled at you. I'm just tired of it all.
Nurse: You're feeling discouraged.

Patient: I hate myself. Look at me. I'm nothing but a drunk.
Nurse: You're ashamed of yourself.

Patient: I've been waiting and waiting for my wife.
Nurse: You're hurt.

Patient: Look at the nice sunny day and I'm stuck in here.
Nurse: You're feeling low.

Patient: My car is wrecked and I'll never be able to afford another.
Nurse: You're discouraged.

Patient: I've never been a good father. If I had...
Nurse: You're feeling to blame.

Narrator: Now again, you'll get a chance to practice on your own. Reflect the patient's feelings for the six statements that follow. Say your response to the following six patient statements out loud. You'll get fifteen seconds to respond.

Patient: I'm no good to anyone now.
Patient: I don't know if I can go through with this surgery.
Patient: How come no one ever tells me what's going on?
Patient: Nurse will you sit with me?
Patient: I'm not having anymore surgery, I've had enough!
Patient: I'm finally going home.

Narrator: We have now finished reflecting feelings. Again, you may want to take a break and complete written exercise number two, or go onto the third skill.

<u>Providing Information</u>

Narrator: The last skill to be covered is a very important skill since a major portion of a nurse's time entails patient teaching. It is important that some basic principles are followed when teaching or providing information. To understand these let's listen to a nurse who poorly teaches pre-operative preparation to a patient. Note how this nurse moves much too quickly, uses words the patient probably doesn't understand, and doesn't check out to see what the patient heard or understood.

Nurse: Hi. I'm supposed to tell you what's going to happen pre-operatively. You're going for a chole tomorrow. Tonight, we'll give you a shave prep and we'll keep you NPO. Tomorrow you'll get pre-op medication and we'll lock up your wedding rings. Okay?

Patient: Okay.

Narrator: Notice how quickly she went. This poor patient probably had no dea of what was going to happen to him. Few patients know what a "chole" is or what "NPO" means. This nurse did not check out to see what her patient understood or if he had any questions. Let's hear this skill modeled in a more facilitative way. Note how this nurse uses repetition of lay points and frequent stops to check out patient understanding. She supplies necessary information in a concise manner, using words the patient can understand. She also personalizes information by using his name and being sensitive to his fears.

Nurse: Mr. Jones, I would like to explain what is going to happen to you between tonight and

when you have your surgery tomorrow. Is that okay with you?

Patient: Yes, I do have some questions.

Nurse: What has your doctor told you about surgery?

Patient: Very little. He said I'll be put to sleep.

Nurse: That's right. An anesthetist will be with you the whole time.

Patient: What about pain after. Will I get something for it?

Nurse: Yes, you will get something for pain after. There are a few other things I'd like to go over. Tonight a nurse will come in and shave some hair off where the incision will be. This is to decrease bacteria in the area and decrease the risk of infection. Do you have any questions about this?

Patient: No.... My friend told me I won't be able to drink or eat after midnight. Is that true?

Nurse: Yes, we'll put a sign on your bed that says NPO. That is a latin abbreviation for nothing by mouth. That sign will be a reminder for you and all others.

Patient: Why can't I eat or drink?

Nurse: Because we want to decrease any chance of you vomiting during surgery and inhaling this. That can cause lung infections.

Patient: That makes sense. I won't drink then.

Nurse: Good. Now there's a few other things I'll go over but first lets quickly review what we've talked about. Tell me the main ideas we've covered already.

Narrator: Can you see that this patient probably had a much better understanding of what was going to happen to him? The nurse repeated key points, provided information concisely and explained technical terms. She personalized her teaching by using the patient's name and by being sensitive to his needs.
Now let's hear this skill demonstrated in response to six separate patient statements. To demonstrated this skill some background information about the patient will be provided. This is to help you understand what this nurse is teaching and why. The situation is this: Mr. Holt has just been discharged from hospital after being diagnosed as having diabetes. He has been placed on insulin and a home care nurse is going to go to his home daily to give it to him. The nurse is providing discharge teaching.

Patient: I don't really have to take insulin every day now that I feel well, do I?
Nurse: Mr. Holt, insulin helps you control the sugar in your blood. Since your body isn't making any now, you need to take it everyday. I'll bring some books in to help expalin this.

Narrator: Note in this example the nurse answers the patient's question and then offered to get information to help the patient understand. Note that you as a nurse aren't expected to have all the information at hand.

Patient: The dietician supplied me with a diet to follow at home. I really love cheese cake. Do you think I can eat that?
Nurse: I'm not sure what your dietician told you and I'll check on it before you leave.

Narrator: Note that this nurse acknowledged her lack of knowledge about the subject and referred to the appropriate source to get information this patient needed.

Patient: How come I have to have blood drawn every week after I'm discharged?
Nurse: Mr. Holt, that is to help maintain your blood sugar. Since you've just begun on insulin, you'll need frequent checks at first. Is that what your doctor told you?

Narrator: Note that the nurse answered the patient's question and checked to see what the patient had been told by the doctor.

Patient: Why do I have to take special care of my feet?
Nurse: Well Mr Holt, a person who has diabetes is more prone to infection. Your feet are a good place for infections to start. Therefore you need to keep the skin soft, make sure you don't get any cracks in them and wash them daily. Do you understand that?

Narrator: This nurse checked out to see what the patient understood.

Patient: I'm going to buy sugar pills like my neighbor takes. I don't want to have daily needles.
Nurse: Unfortunately Mr. Holt there aren't pills that will help you. Sometimes a person can take pills if their body makes some insulin on its own and the pills stimulate this production. But your body doesn't make any insulin, therefore the pills wouldn't help you. Does that make sense to you?

Narrator: This nurse here briefly and concisely provided factual information to Mr. Holt and then checked out his understanding.

Patient: When will that nurse come to give me my insulin?
Nurse: She'll come every morning Mr. Holt. She left her card at the deak. I'll get it for you.

Narrator: Here the nurse answered Mr. Holt and then offered to get him the nurse's card to serve as a reminder.

Now you'll get a chance to practice. Again, a situation will be provided. All the information you need is included. You just have to decide in your response what to say to the patient. Remember to try to check out after a response to see if your patient understands if this is appropriate, even though you won't get a response to your statement. Compare your response to the one that follows.

Situation: Mr. Brown, aged 42, was admitted after an acute heart attack to intensive care six days ago. His condition was very serious and his heart is permanently damaged. He is stable now and transferred to your ward. He has been told to lose weight and seriously consider a career change. He has been told that his career contributed to his heart attack. He has also been placed on a 1200 calorie diet. A dietician has been called into see him. He asks the following questions. Try to respond out loud. You'll have

fifteen seconds to provide information to this patient.

Patient: Nurse can you teach me about my diet?
Nurse: I can help clarify what the dietician will teach you Mr. Brown.

Patient: Once my heart is healed, I don't think my job will harm me, do you?
Nurse: Mr. Brown did the doctor talk to you about your job? He told me that he feels your job contributed to your heart attack because of the stress involved.

Patient: I don't think 1200 calories is enough to keep me alive - is it?
Nurse: From what I know, as long as the diet is balanced, 1200 calories is enough for you to live on until you lose the desired weight. Yes, it is enough Mr. Brown. What have your read about diets?

Patient: How come this ward has less nurses than the last one?
Nurse: Because in intensive care, where you were, the patients are seriously ill and require more nurses to care for them.

Patient: I could have died from that heart attack, couldn't I?
Nurse: Yes, you were seriously ill Mr. Brown.

Patient: Why do I have to lose weight. What's that got to do with my heart?
Nurse: Extra weight causes extra stress on your heart because blood has to be supplied to all the fatty tissue. Therefore your heart has to work that much harder. Does that help answer your question Mr. Brown?

Patient: Do you think I'll have another heart attack?
Nurse: There are a few things you can do to decrease your chances of having another. Your doctor told you two things this morning. Can you tell me what he told you?

Patient: I thought that because I didn't smoke I would never have a heart attack. I guess I was wrong, eh?
Nurse: Smoking is only one predisposing factor. Your weight and your job were two others for you.

Patient: My heart is fine now isn't it?
Nurse: Your heart is healing now but there is some damage to it. What did your doctor tell you?

Patient: Boy that was awful in intensive care. How long was I in there?
Nurse: Six days Mr. Brown. How long did it feel like?

Patient: Will I ever lead a normal life again?
Nurse: There needs to be some changes in your life style Mr. Brown. Let's review what your doctor said.

Patient: I'll probably need a heart transplant in a few years eh?
Nurse: Mr. Brown, that is usually a last resort. Your heart is healing now and if you lose weight and decrease the stress in your life your will decrease the chances of another heart attack.

Narrator: Now, you'll get a chance to practice on your own. Again, a situation will be provided so you have the information needed. Use it to provide patient teaching.

The situation is: Mr. Stevenson was admitted with pneumonia. He's placed on intravenous antibiotics. He asks you the following questions. You'll have fifteen seconds to respond.

Patient: Nurse, what is normal temperature?
Patient: How come I have an I.V.?
Patient: I'm supposed to be on complete bedrest. What does that mean?
Patient: The doctor said I need medication Q4H. what does that mean?
Patient: I'm supposed to drink a lot for my fever. Why?
Patient: What part of the body does pneumonia affect?

Narrator: This is the end of this program. Stop your tape and complete written exercise number three. Thank-you for your time and participation.

APPENDIX B

INSTRUCTIONS TO STUDENTS FOR ROLE-PLAYED INTERVIEW

ROLE-PLAYED SITUATION

The patient you are about to encounter is a female playing the role of a patient who has just been diagnosed as having essential hypertension. She has been told to quite smoking and decrease her salt intake. You are requested to use the three communication skills of open questioning, reflection of feelings, and patient teaching to find out how she feels about her diagnosis and the treatments prescribed and then you want to teach her what a restricted salt diet is.

You want her to understand that restriction of sodium intake is essential in controlling blood pressure because excessive sodium intake tends to cause water retention. Therefore, the heart must use greater pressure to pump the increased fluid volume, causing the blood pressure against the vessal walls to rise.

The points you want her to know about a low salt diet include:

1. Avoid using table salt.
2. Reduce the amount of salt in cooking.
3. Avoid foods such as ham, bacon, sausage, potato chips, luncheon meats, pretzels, canned soups, pickles, and processed foods, as these are all high in sodium content.
4. Read labels on all foods to check whether salt is listed as a major ingredient.
5. Check with physician or pharmacist before taking over the counter medication as these may be high in sodium content.

Try to keep your interview short and use all three skills taught to you.

APPENDIX C

WRITTEN POST-TESTS FOR ALL THREE SKILLS

OPEN QUESTIONS

Respond to this patient's statements by writing an open question for each of the following.

1. When I go home it is going to be hard you know.

2. My wife was in this hospital too.

3. I'm going to discharge myself today.

4. I sure feel shakey today.

5. My family visited me for a while today.

6. I'd sure like to talk to you for a while.

REFLECTING FEELINGS

Respond to this patient's statements by writing a response that reflects feelings.

1. Boy, am I glad it wasn't cancer.

2. Here it is, the weekend again, and I'm all alone....

3. This is really stupid. I don't have time to be ill!

4. One person tells me one thing and another something else--can't you guys get your story straight?

5. I really wanted this baby. I didn't want to lose it....

6. I got such good news today.

PROVIDING INFORMATION

For the following situation try to write a response that answers the patient's questions after reading the situation.

SITUATION: Mr Jones, 32 years old, was admitted to hospital because he was coughing up blood. Tests have been run and lung cancer is suspected. The doctor has talked to him for one and one-half hours this morning, explaining this to him. He was told to quite smoking. He was also told he'll have a lung scan this morning to isolate the tumor and he'll be seen by a surgeon to discuss surgery. His doctor told him the survery will help confirm the diagnosis and determine how advanced the lung cancer is. You've been told that his cancer is serious and he has a life expectancy of less than 3 years. He asks you the following questions:

1. I'm going to have one cigarette, after all it won't hurt me now.

2. Will the lung scan hurt?

3. Having lung cancer means I'll probably die. Right?

4. What will a lung scan tell us?

5. Do you know what is wrong with me?

6. I thought that only old people get cancer, is that right?

APPENDIX D

ORAL POST-TESTS FOR ALL THREE SKILLS

ORAL POST-TEST

Test Tape

Narrator: This tape will define three communication skills. Following a short definition of each skill you will be asked to respond on a tape recorder to six patient statements.

Open Questions

Narrator: These are questions designed to encourage a patient to respond with more than one or two words. Turn on your tape recorder and try to state an open question in response to the following patient statements. You'll have fifteen seconds to do so.

Patient: Another night ahead. It's going to be a long one.
Patient: I think the end is near now.
Patient: I sure wished you were here yesterday.
Patient: It's too late for that now.
Patient: I sure felt awful last night.

Reflecting Feelings

Narrator: The second skill to be presented is called reflecting feelings. This is a skill used to help a patient recognize, identify or understand feelings he or she is expressing explicitly or implicitly. When using this skill you try to identify the feeling and describe this back to the patient.

Again, turn on the second tape recorder and try to respond to the following patient statements by reflecting his feelings. You'll have fifteen seconds to make your response.

Patient: Yeah, they told me I was seriously ill. I never thought it would be me.
Patient: You know I never get any rest here. This isn't a hospital. It's grand central station.
Patient: If only I had someone to talk things over with. No one cares.
Patient: I'm looking forward to going home, but it's scary too.
Patient: I don't think I can give myself insulin in a needle, no. . .
Patient: Such a big place. I'm just a disease here.

Providing Information

Narrator: This is the last skill to be presented. This is a more complex skill that has several components. Using this skill allows you to provide information to a patient.Again, turn on your tape recorder. Listen to the situation and try to respond to this patient by giving him information. The situation included here is to provide you with the information you need to answer his questions.

The situation is this. Mr. White, 32 years old, has just been admitted to hospital because he's coughing up blood. Tests have been run and lung cancer is suspected. The doctor has talked to him for 1 1/2 hours this morning explaining this to him. He was told to quite smoking. He was also told he'll have a lung scan this afternoon and will be seen by a surgeon to discuss lung surgery. His doctor told him the surgery will help confirm

the diagnosis and determine how advanced the lung cancer is. You've been told his cancer is serious with a life expectancy of less than three years. He asks you the following questions. You have fifteen seconds to respond.

Patient: Nurse do you know what's wrong with me yet?
Patient: Can cancer like mine be cured?
Patient: Do you think I'll get better?
Patient: Why do I have to see another doctor?
Patient: When is the lung scan being done?
Patient: If I already know I have cancer, what good will the surgery do?

APPENDIX E

BEHAVIORAL COMPONENTS FOR THE THREE SKILLS

BEHAVIORAL COMPONENTS FOR EACH SKILL

Open Questions

Should be more than one or two words.
Should encourage a patient to provide a response that is more than one or two words.
Should be relevant to the patient's statement or concern.
Should not be threatening.

Reflecting Feelings

Should identify a feeling implicitly or explicitly expressed by the patient.
Should state this feeling in a response to the patient.
Should encourage the patient to clarify, recognize or identify his or her feelings.

Providing Information

Should be in language that is appropriate for the patient.
Should be adequate to cover necessary information utilizing examples or descriptions if appropriate, and repetition of key points.
Should build on knowledge the patient already has.
Should include a "check-out" to determine the degree of understanding by the patient.
Should be presented in a sensitive manner.
If the nurse cannot answer a patient's question due to lack of background information or the nature of the patient's question, the response should acknowledge this.

APPENDIX F

RATING SCALES FOR ALL THREE SKILLS

RATING SCALES

Open Questions

Level 1 The response will elicit a one or two word response from the patient. The response tends to close off conversation.

Level 2 The response is in the form of an open question but phrased in such a way that it may be perceived as threatening or it is off topic. Multiple questions may be presented.

Level 3 The response is an open question that tends to encourage the patient to talk about events rather than personal feelings. It also may invite the patient to discuss others.

Level 4 The response is an open question that encourages the patient to elaborate on perceptions or feelings.

Level 5 The response is an open question that encourages the patient to reveal deeper feelings and deeper content. It will encourage the patient to interpret and clarify perceptions.

Reflection of Feelings

Level 1 The response ignores or negates the patient's feelings through rationalization, advice giving, or identifying grossly inaccurate feelings.

Level 2 The response reflects content rather than feelings.

Level 3 The response identifies a feeling that is essentially or partially correct, thereby not cutting conversation off or negating feelings. However, the response promotes exploration of obvious expressed feelings rather than underlying feelings.

Level 4 The response identifies feelings that are deeper and less obvious and correct, promoting exploration of these feelings.

Level 5 The feeling the patient is expressing overtly, subtly or ambivalently is described accurately and clearly. The patient is therefore encouraged to recognize and clarify this feeling. The reflection attempts to move the conversation to a level that promotes deeper exploration.

Providing Information

Level 1 The information presented is grossly inaccurate or presented bluntly without any sensitivity for the patients feelings.

Level 2 The response provides an answer that is partially correct. The response may provide false reassurance or may be in words the patient doesn't understand or in word that are too simplistic and therefore degrading. The nurse assumes that he or she knows what the patient has already been told and therefore may provide information which contradicts this. The response is somewhat insensitive and not personalized.

Level 3 The nurse provides accurate factual information that is neutral in tone. No check out to determine what the patient already knows or understands after is included.

Level 4 The nurse checks out to determine what the patient already knows and provides information in terms of this. The information is personalized and sensitively presented. If lengthy information is presented, frequent stops to check patient understanding are included. The nurse may acknowledge that he or she cannot answer a question and may refer the patient to an appropriate source, however, by doing so she or he does not encourage further discussion.

Level 5 The nurse checks out to determine what the patient already knows and provides information in terms of this. If lengthy information is presented, repetition, examples, and frequent check-outs are included. The nurse may also ask the patient to state back what he or she has learned. If the nurse cannot answer a question, he or she admits this and seeks further information for the patient or follows through in an attempt to clarify the concern of the patient.

APPENDIX G

CONSENT TO PARTICIPATE

CONSENT TO PARTICIPATE

Thank you for volunteering to participate in my study on a self-instructional method to teach three communication skills used by nurses. Your participation will be anonymous. Your name will not be used in any way from this study.

The purpose of this study is to complete a masters thesis. Results in the future may be used to design a program to teach other communication skills to nurses.

Your participation will be in terms of listening to an audiocassette tape that will present three communication skills. You will also be asked to respond to patient statements and talk with a role-played patient. This is for evaluation of the self-instructional programs presented on the cassette tape. Your responses will not be used in any way beyond this purpose. The total amount of time that will be required is approximately one hour. Participation is voluntary. Should you begin the session and not wish to continue, you may withdraw at any time.

Please sign below to indicate you agree to participate in this study.

_____

I _____ agree to participate in the study on a self-instructional method to teach three communication skills. These skills are open questioning, reflection of feelings, and patient teaching. I am aware that my name will not be used in this study.

Thank you for volunteering your time.

Yours truly

S. Ludwig
M.Ed. Student
Faculty of Education
University of Alberta

APPENDIX H

SUBJECTIVE PATIENT EVALUATION

PATIENT EVALUATION

1. Did this student try to understand your feelings using the skills tau1ght?

   NOT AT ALL SOMEWHAT DEFINITELY

2. Did the student teach about a low salt diet well?

   NOT AT ALL SOMEWHAT DEFINITELY

3. Did the interview feel natural?

   NOT AT ALL SOMEWHAT DEFINITELY

4. On a five point scale with 5 being outstanding, how would you rate this student's ability to communicte?

   1 2 3 4 5